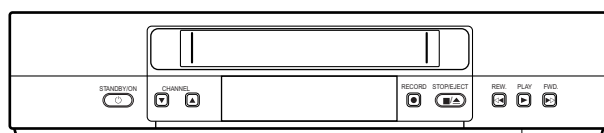
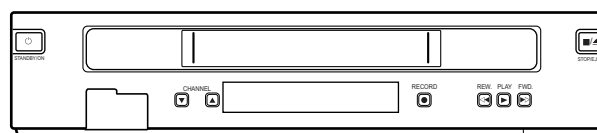


Service Service Service



VR340/55/75



VR740/55/75

Service Manual

Contents

Chapter

Sec. 1: Specifications

Adjustment Procedure
Schematic Diagrams and CBA's
Exploded Views
Mechanical and Electrical Parts Lists

Sec. 2: Standard Maintenance

Mechanism Alignment Procedures
Disassembly / Assembly of Mechanism
Deck Exploded Views

Survey of types:

VR340, VR740: Video Cassette Recorder

Survey of versions:

/55/75

PAL

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.



MAIN SECTION

VIDEO CASSETTE RECORDER

Sec. 1: Main Section

- Specifications
- Adjustment Procedures
- Schematic Diagrams and CBA's
- Exploded Views
- Mechanical and Electrical Parts List

TABLE OF CONTENTS

SPECIFICATIONS	1-1-1
IMPORTANT SAFETY PRECAUTIONS	1-2-1
STANDARD NOTES FOR SERVICING	1-3-1
FUNCTION INDICATOR SYMBOLS	1-4-1
PREPARATION FOR SERVICING	1-5-1
OPERATING CONTROLS AND FUNCTIONS	1-6-1
SIGNAL NAME ABBREVIATIONS	1-7-1
CABINET DISASSEMBLY INSTRUCTIONS	1-8-1
ELECTRICAL ADJUSTMENT INSTRUCTIONS	1-9-1
Adjustment Points and Test Points	1-9-2
BLOCK DIAGRAMS	1-10-1
SCHEMATIC DIAGRAMS / CBA'S AND TEST POINTS	1-11-1
Main 1/5 Schematic Diagram Parts Location Guide	1-11-2
Main 1/5 Schematic Diagram	1-11-3
Main 2/5 & Sensor & SW1 & SW2 Schematic Diagram	1-11-5
Main 2/5 Schematic Diagram Parts Location Guide	1-11-7
Main 3/5 Schematic Diagram Parts Location Guide	1-11-8
Main 3/5 Schematic Diagram	1-11-9
Main 4/5 Schematic Diagram	1-11-11
Main 4/5 Schematic Diagram Parts Location Guide	1-11-13
Main 5/5 Schematic Diagram Parts Location Guide	1-11-14
Main 5/5 Schematic Diagram (C,D)	1-11-15
AFV Schematic Diagram (C,D)	1-11-17
Main CBA Top View	1-11-19
Main CBA Bottom View	1-11-21
Main CBA Parts Location Guide	1-11-23
SW1 & SW2 & AFV CBA Top/Bottom View	1-11-25
WAVEFORMS	1-12-1
WIRING DIAGRAM	1-13-1
SYSTEM CONTROL TIMING CHARTS	1-14-1
IC PIN FUNCTION DESCRIPTIONS	1-15-1
LEAD IDENTIFICATIONS	1-16-1
ELECTRICAL PARTS LIST	1-17-1
EXPLODED VIEWS	1-18-1
SET MECHANICAL PARTS LIST	1-19-1

SPECIFICATIONS

Comparison Chart of Models and Marks

Model	Mark
VR340/55	A
VR340/75	B
VR740/55	C
VR740/75	D

Description	Unit	Minimum	Nominal	Maximum	Remark
1. Video					
1-1. Video Output (PB)	Vp-p	0.8	1.0	1.2	SP Mode
1-2. Video Output (R/P)	Vp-p	0.8	1.0	1.2	
1-3. Video S/N Y (R/P)	dB	40	45		SP Mode, W/O Burst
1-4. Video Color S/N AM (R/P)	dB	37	41		SP Mode
1-5. Video Color S/N PM (R/P)	dB	30	36		SP Mode
1-6. Resolution (PB)	Line	230	245		SP Mode
2. Servo					
2-1. Jitter Low	μsec		0.07	0.12	SP Mode
2-2. Wow & Flutter	%		0.3	0.5	SP Mode
3. Normal Audio					
3-1. Output (PB)	dBV	-9	-6	-3	SP Mode
3-2. Output (R/P)	dBV	-9	-6	-1.5	SP Mode
3-3. S/N (R/P)	dB	36	41		SP Mode
3-4. Distortion (R/P)	%		1.0	4.0	SP Mode
3-5. Freq. resp (R/P) at 200Hz	dB	-7	-4		SP Mode
(-20dB ref. 1kHz) at 6kHz	dB	-10	-4		SP Mode
4. Tuner					
4-1. Video output	Vp-p	0.8	1.0	1.2	E-E Mode
4-2. Video S/N	dB	39	42		E-E Mode
4-3. Audio output	dB	-10	-6	-2	E-E Mode
4-4. Audio S/N	dB	40	46		E-E Mode
5. Hi-Fi Audio [C, D]					
5-1. Output	dBV	-12	-8	-4	SP Mode
5-2. Dynamic Range	dB	70	85		SP Mode
5-3. Freq. resp (6dB B.W)	Hz		20 ~ 20K		SP Mode

Note: Nominal specs represent the design specs. All units should be able to approximate these – some will exceed and some may drop slightly below these specs. Limit specs represent the absolute worst condition that still might be considered acceptable; In no case should a unit fail to meet limit specs.

IMPORTANT SAFETY PRECAUTIONS

Product Safety Notice

Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by a ⚠ on schematics and in parts lists. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire, and/or other hazards. The Product's Safety is under review continuously and new instructions are issued whenever appropriate. Prior to shipment from the factory, our products are carefully inspected to confirm with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

Precautions during Servicing

- A. Parts identified by the ⚠ symbol are critical for safety. Replace only with part number specified.
- B. In addition to safety, other parts and assemblies are specified for conformance with regulations applying to spurious radiation. These must also be replaced only with specified replacements.
Examples: RF converters, RF cables, noise blocking capacitors, and noise blocking filters, etc.
- C. Use specified internal wiring. Note especially:
 - 1) Wires covered with PVC tubing
 - 2) Double insulated wires
 - 3) High voltage leads
- D. Use specified insulating materials for hazardous live parts. Note especially:
 - 1) Insulation tape
 - 2) PVC tubing
 - 3) Spacers
 - 4) Insulators for transistors
- E. When replacing AC primary side components (transformers, power cord, etc.), wrap ends of wires securely about the terminals before soldering.
- F. Observe that the wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).
- G. Check that replaced wires do not contact sharp edges or pointed parts.
- H. When a power cord has been replaced, check that 5 - 6 kg of force in any direction will not loosen it.
- I. Also check areas surrounding repaired locations.
- J. Use care that foreign objects (screws, solder droplets, etc.) do not remain inside the set.
- K. Crimp type wire connector
The power transformer uses crimp type connectors which connect the power cord and the primary side of the transformer. When replacing the transformer, follow these steps carefully and precisely to prevent shock hazards.
Replacement procedure
 - 1) Remove the old connector by cutting the wires at a point close to the connector.
Important: Do not re-use a connector. (Discard it.)
 - 2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.
 - 3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.
 - 4) Use a crimping tool to crimp the metal sleeve at its center. Be sure to crimp fully to the complete closure of the tool.
- L. When connecting or disconnecting the internal connectors, first, disconnect the AC plug from the AC outlet.

Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts, and wires have been returned to their original positions. Afterwards, do the following tests and confirm the specified values to verify compliance with safety standards.

1. Clearance Distance

When replacing primary circuit components, confirm specified clearance distance (d) and (d') between soldered terminals, and between terminals and surrounding metallic parts. (See Fig. 1)

Table 1 : Ratings for selected area

AC Line Voltage	Clearance Distance (d) (d')
110 to 240 V (Auto) [VR340/55, VR740/55], 240 V [VR340/75, VR740/75]	$\geq 3 \text{ mm(d)}$ $\geq 6 \text{ mm(d')}$

Note: This table is unofficial and for reference only.
Be sure to confirm the precise values.

2. Leakage Current Test

Confirm the specified (or lower) leakage current between B (earth ground, power cord plug prongs) and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.) is lower than or equal to the specified value in the table below.

Measuring Method (Power ON) :

Insert load Z between B (earth ground, power cord plug prongs) and exposed accessible parts. Use an AC voltmeter to measure across the terminals of load Z. See Fig. 2 and the following table.

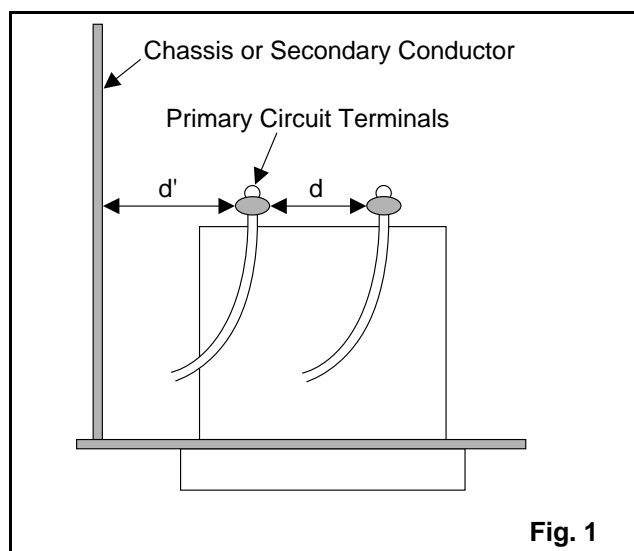


Fig. 1

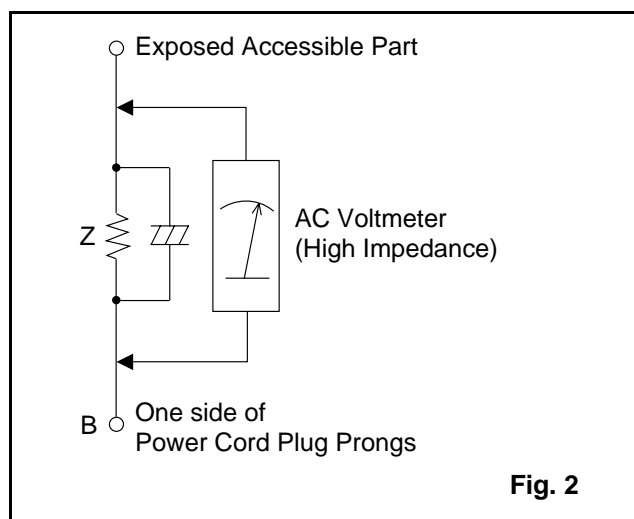


Fig. 2

Table 2: Leakage current ratings for selected areas

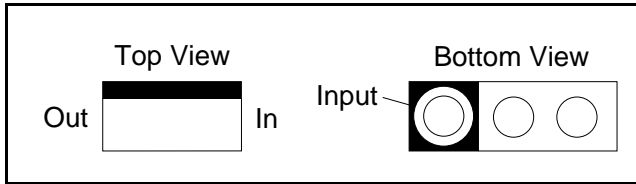
AC Line Voltage	Load Z	Leakage Current (i)	One side of power cord plug prongs (B) to:
110 to 240 V (Auto) [VR340/55, VR740/55], 240 V [VR340/75, VR740/75]	2k Ω RES. Connected in parallel	$i \leq 0.7 \text{ mA AC Peak}$ $i \leq 2 \text{ mA DC}$	RF or Antenna terminals
	50k Ω RES. Connected in parallel	$i \leq 0.7 \text{ mA AC Peak}$ $i \leq 2 \text{ mA DC}$	A/V Input, Output

Note: This table is unofficial and for reference only. Be sure to confirm the precise values.

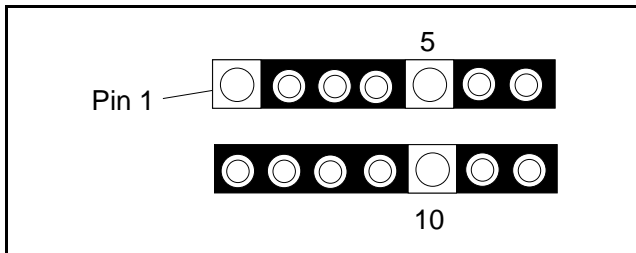
STANDARD NOTES FOR SERVICING

Circuit Board Indications

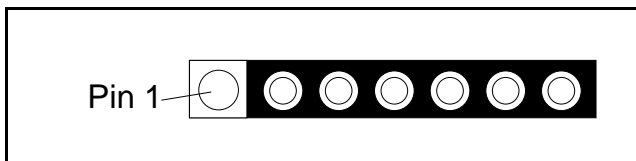
- a. The output pin of the 3 pin Regulator ICs is indicated as shown.



- b. For other ICs, pin 1 and every fifth pin are indicated as shown.

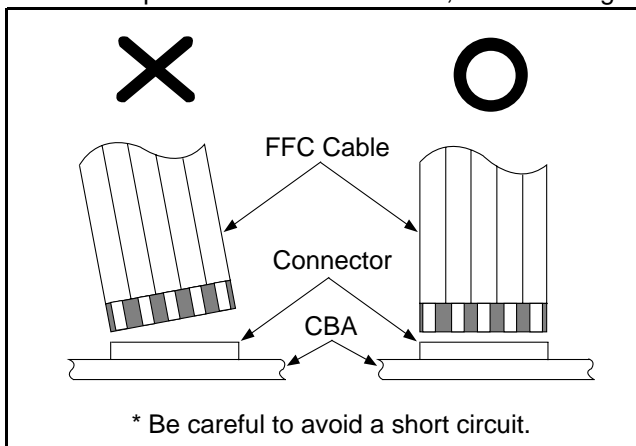


- c. The 1st pin of every male connector is indicated as shown.



Instructions for Connectors

- When you connect or disconnect the FFC (Flexible Foil Connector) cable, be sure to first disconnect the AC cord.
- FFC (Flexible Foil Connector) cable should be inserted parallel into the connector, not at an angle.

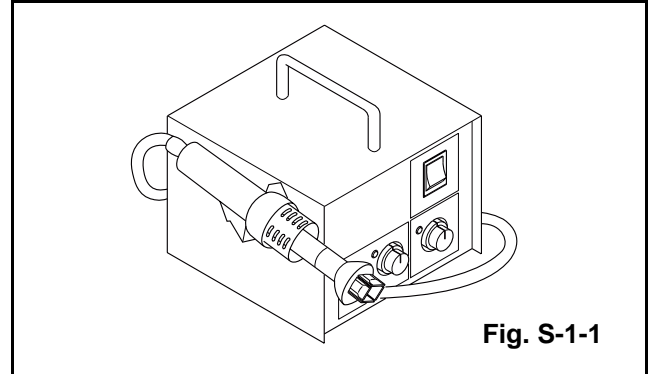


How to Remove / Install Flat Pack-IC

1. Removal

With Hot-Air Flat Pack-IC Desoldering Machine:

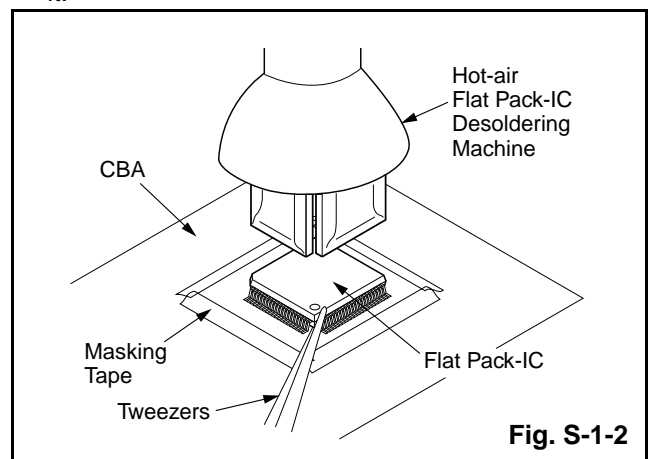
- (1) Prepare the hot-air flat pack-IC desoldering machine, then apply hot air to the Flat Pack-IC (about 5 to 6 seconds). (Fig. S-1-1)



- (2) Remove the flat pack-IC with tweezers while applying the hot air.
- (3) Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
- (4) Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

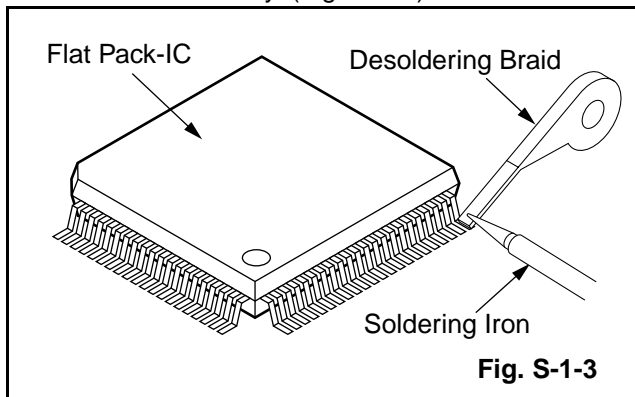
Caution:

- Do not supply hot air to the chip parts around the flat pack-IC for over 6 seconds because damage to the chip parts may occur. Put masking tape around the flat pack-IC to protect other parts from damage. (Fig. S-1-2)
- The flat pack-IC on the CBA is affixed with glue, so be careful not to break or damage the foil of each pin or the solder lands under the IC when removing it.

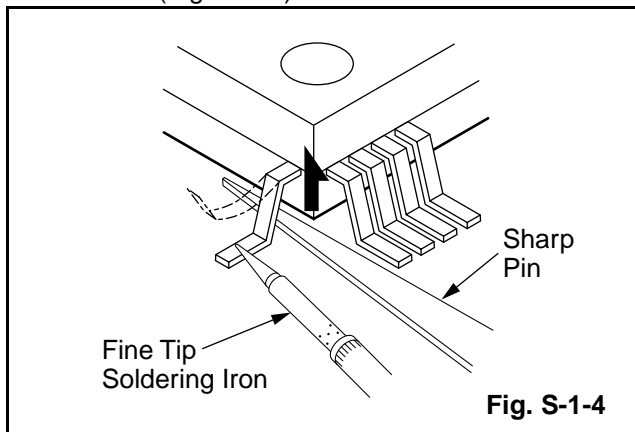


With Soldering Iron:

- (1) Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)



- (2) Lift each lead of the flat pack-IC upward one by one, using a sharp pin or wire to which solder will not adhere (iron wire). When heating the pins, use a fine tip soldering iron or a hot air desoldering machine. (Fig. S-1-4)



- (3) Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
- (4) Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

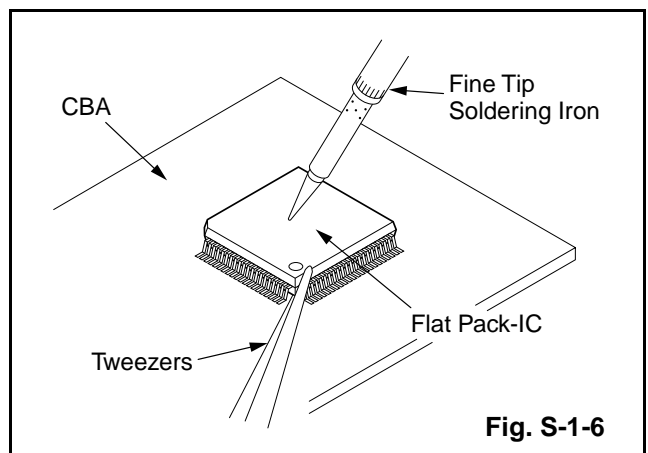
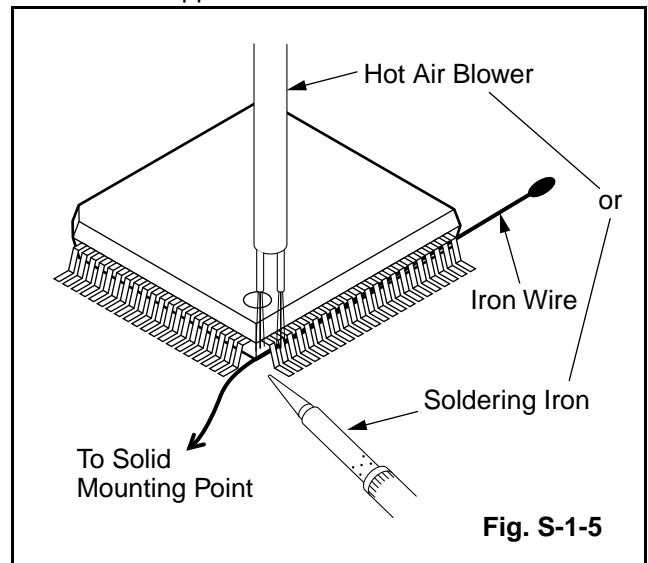
With Iron Wire:

- (1) Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)
- (2) Affix the wire to a workbench or solid mounting point, as shown in Fig. S-1-5.
- (3) While heating the pins using a fine tip soldering iron or hot air blower, pull up the wire as the solder melts so as to lift the IC leads from the CBA contact pads as shown in Fig. S-1-5

- (4) Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
- (5) Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

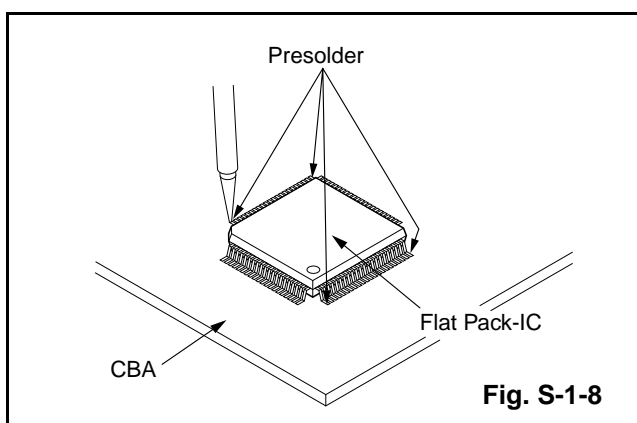
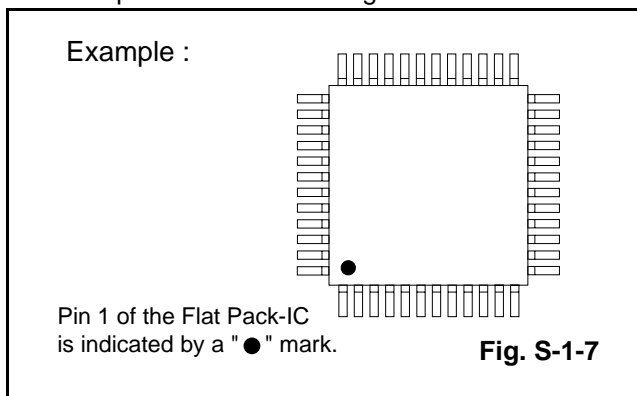
Note:

When using a soldering iron, care must be taken to ensure that the flat pack-IC is not being held by glue. When the flat pack-IC is removed from the CBA, handle it gently because it may be damaged if force is applied.



2. Installation

- (1) Using desoldering braid, remove the solder from the foil of each pin of the flat pack-IC on the CBA so you can install a replacement flat pack-IC more easily.
- (2) The "●" mark on the flat pack-IC indicates pin 1. (See Fig. S-1-7.) Be sure this mark matches the 1 on the PCB when positioning for installation. Then presolder the four corners of the flat pack-IC. (See Fig. S-1-8.)
- (3) Solder all pins of the flat pack-IC. Be sure that none of the pins have solder bridges.



Instructions for Handling Semi-conductors

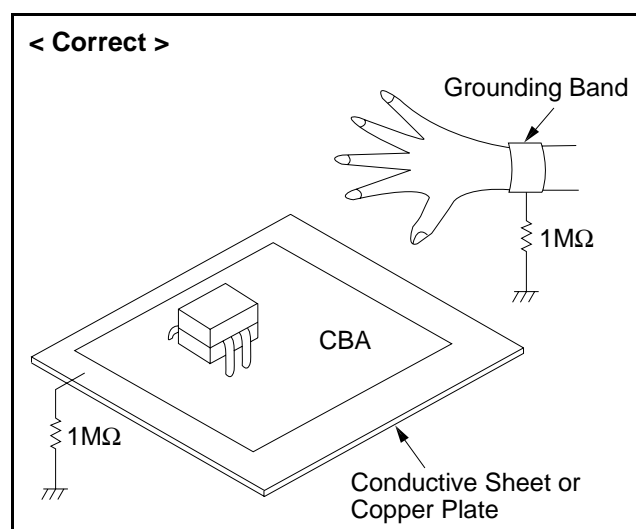
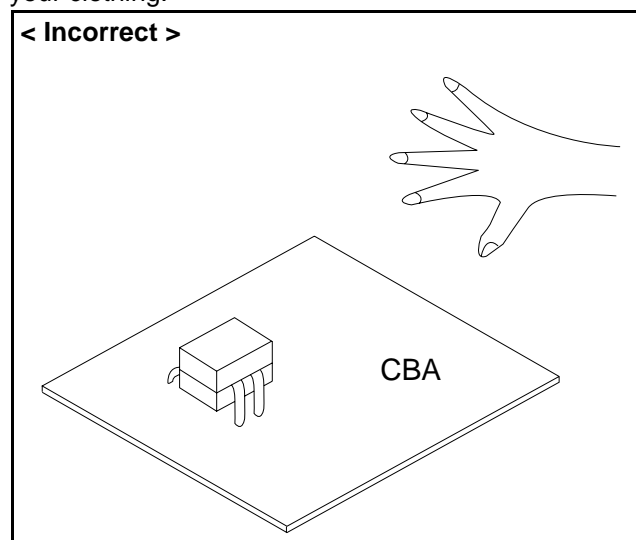
Electrostatic breakdown of the semi-conductors may occur due to a potential difference caused by electrostatic charge during unpacking or repair work.

1. Ground for Human Body

Be sure to wear a grounding band ($1M\Omega$) that is properly grounded to remove any static electricity that may be charged on the body.

2. Ground for Workbench

Be sure to place a conductive sheet or copper plate with proper grounding ($1M\Omega$) on the workbench or other surface, where the semi-conductors are to be placed. Because the static electricity charge on clothing will not escape through the body grounding band, be careful to avoid contacting semi-conductors with your clothing.



FUNCTION INDICATOR SYMBOLS









Note:

The following symbols will appear on the indicator panel to indicate the current mode or operation of the VCR. On-screen modes will also be momentarily displayed on the tv screen when you press the operation buttons.

Display panel



" H " = LED Light on, " L " = LED Light off

LED MODE	INDICATOR ACTIVE	
CASSETTE "IN"	"  "	ON
CASSETTE "OUT"	"  "	OFF
CLOCK	" 88:88 "	ON
POWER ON	" PWR. "	ON
REC	" REC "	ON
REC PAUSE	" REC "	Blinks at 0.8Hz interval
T-REC,OTR	"  "	ON (T-REC OFF,T-REC incomplete Blinks at 0.8Hz interval)
When reel and capstan mechanism is not functioning correctly	"  " " 1 "	Blinks at 0.8Hz interval
When tape loading mechanism is not functioning correctly	"  " " 2 "	Blinks at 0.8Hz interval
When cassette loading mechanism is not functioning correctly	"  " " 3 "	Blinks at 0.8Hz interval
When the drum is not working properly	"  " " 4 "	Blinks at 0.8Hz interval
P-ON Power safety detection	"  " " 5 "	Blinks at 0.8Hz interval
S-INH condition	All modes	Blinks at 0.8Hz interval

PREPARATION FOR SERVICING

How to Enter the Service Mode

About Optical Sensors

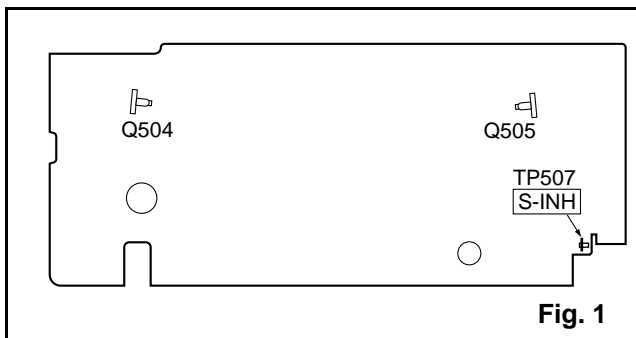
Caution:

An optical sensor system is used for the Tape Start and End Sensors on this equipment. Carefully read and follow the instructions below. Otherwise the unit may operate erratically.

What to do for preparation

Insert a tape into the Deck Mechanism Assembly and press the PLAY button. The tape will be loaded into the Deck Mechanism Assembly. Make sure the power is on, connect TP507 (SENSOR INHIBITION) to GND. This will stop the function of Tape Start Sensor, Tape End Sensor and Reel Sensors. (If these TPs are connected before plugging in the unit, the function of the sensors will stay valid.) See Fig. 1.

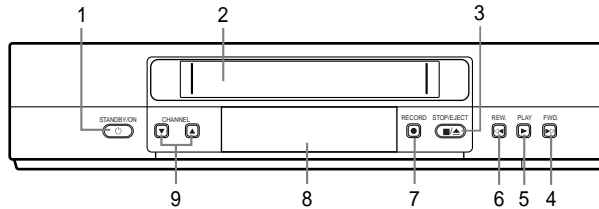
Note: Because the Tape End Sensors are inactive, do not run a tape all the way to the start or the end of the tape to avoid tape damage.



OPERATING CONTROLS AND FUNCTIONS

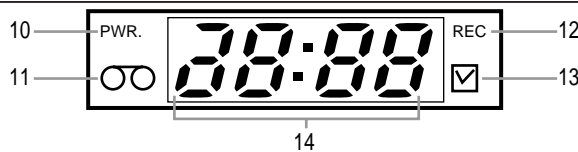
[VR340/55]

Front Panel



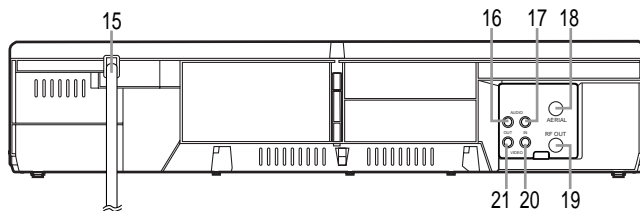
1. STANDBY/ON button
2. Cassette compartment
3. [STOP/EJECT] button
4. [FWD] button
5. [PLAY] button
6. [REW] button
7. RECORD button
8. Display window (See below)
9. CHANNEL (▲/▼) buttons

Indicator



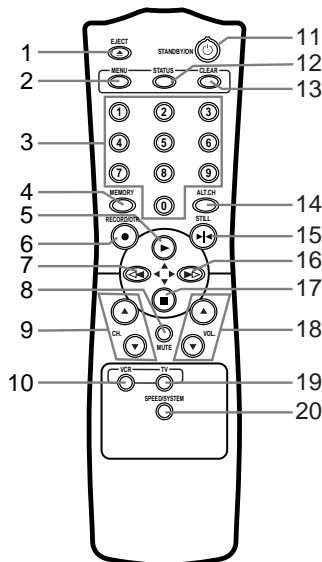
10. PWR. (Power) indicator
11. TAPE IN indicator
12. REC indicator
13. [TIMER] indicator
14. CLOCK indicator

Rear Panel



15. AC power cord
16. AUDIO OUT jack
17. AUDIO IN jack
18. AERIAL terminal
19. RF OUT terminal
20. VIDEO IN jack
21. VIDEO OUT jack

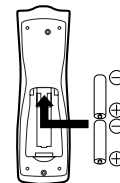
Remote Control



1. EJECT button
2. MENU button
3. NUMBER buttons
4. MEMORY button
5. [PLAY] button
6. RECORD/OTR button
7. [REW] button
8. MUTE button
9. CH(annel). buttons
10. VCR button
11. STANDBY/ON button
12. STATUS button
13. CLEAR button
14. ALT.CH.button
15. STILL button
16. [F.FWD] button
17. [STOP] button
18. VOL(ume) buttons
19. TV button
20. SPEED/SYSTEM button

To insert the batteries

Install two R6 batteries matching the polarity indicated inside the battery compartment.



NOTE

You can use this remote control to operate some PHILIPS TVs. Press [VCR] before pressing VCR feature buttons; press [TV] before pressing TV feature buttons if you have a PHILIPS TV.

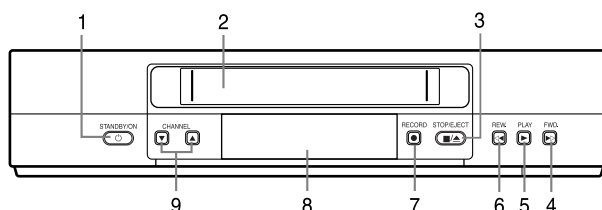
CAUTION

On Battery Replacement

- Do not mix old and new batteries. (Also never mix alkaline batteries with manganese batteries.)

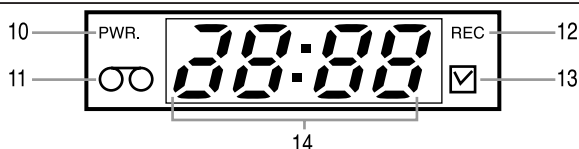
[VR340/75]

Front Panel



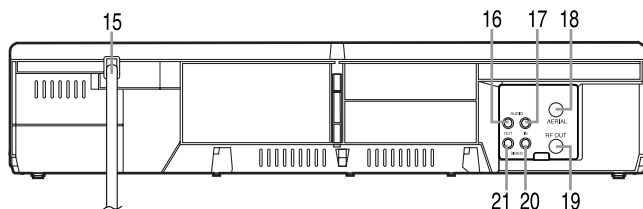
1. STANDBY/ON button
2. Cassette compartment
3. [■/▲] (STOP/EJECT) button
4. [▶▶] (FWD) button
5. [▶] (PLAY) button
6. [◀◀] (REW) button
7. RECORD button
8. Display window (See below)
9. CHANNEL (▲/▼) buttons

Indicator



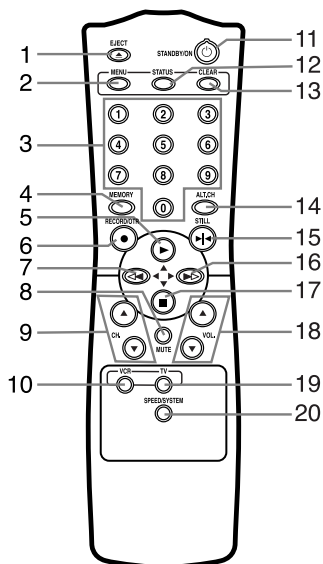
10. PWR. (Power) indicator
11. TAPE IN indicator
12. REC indicator
13. [] (Timer) indicator
14. CLOCK indicator

Rear Panel



15. AC power cord
16. AUDIO OUT jack
17. AUDIO IN jack
18. AERIAL terminal
19. RF OUT terminal
20. VIDEO IN jack
21. VIDEO OUT jack

Remote Control



1. EJECT button
2. MENU button
3. NUMBER buttons
4. MEMORY button
5. [▶(▲)] (PLAY) button
6. RECORD/OTR button
7. [◀◀(◀)] (REW) button
8. MUTE button
9. CH(annel). buttons
10. VCR button
11. STANDBY/ON button

12. STATUS button
13. CLEAR button
14. ALT.CH.button
15. STILL button
16. [▶▶(▶)] (F.FWD) button
17. [■(▼)] (STOP) button
18. VOL(ume) buttons
19. TV button
20. SPEED/SYSTEM button(*)

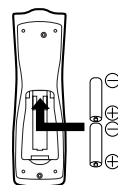
(*) Doesn't work on this model as the SYSTEM button.

NOTE

You can use this remote control to operate some PHILIPS TVs. Press [VCR] before pressing VCR feature buttons; press [TV] before pressing TV feature buttons if you have a PHILIPS TV.

To insert the batteries

Install two R6 batteries matching the polarity indicated inside the battery compartment.



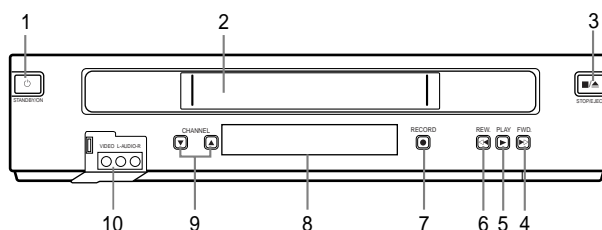
CAUTION

On Battery Replacement

- Do not mix old and new batteries. (Also never mix alkaline batteries with manganese batteries.)

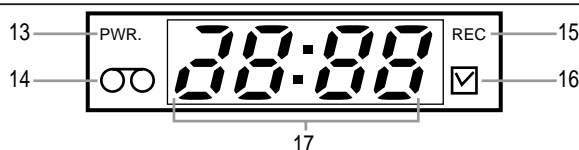
[VR740/55]

Front Panel



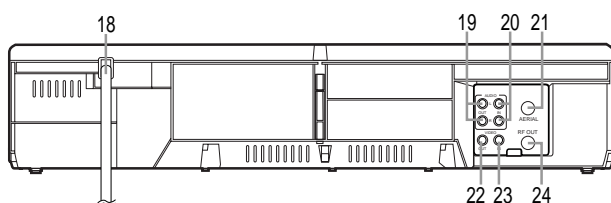
1. STANDBY/ON button
2. Cassette compartment
3. [STOP/EJECT] button
4. [F.FWD] button
5. [PLAY] button
6. [REW] button
7. RECORD button
8. Display window (See below)
9. CHANNEL (▲/▼) buttons
10. A/V CONNECTORS

Indicator



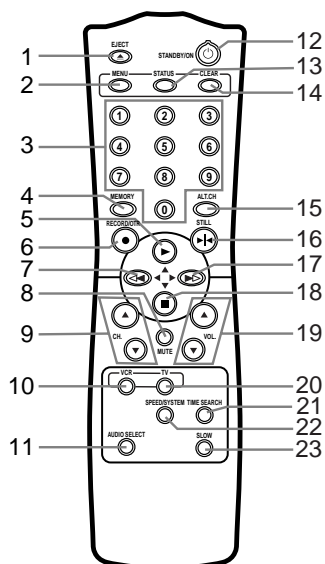
13. PWR. (Power) indicator
14. TAPE IN indicator
15. REC indicator
16. [] (Timer) indicator
17. CLOCK indicator

Rear Panel



18. AC power cord
19. AUDIO OUT jacks
20. AUDIO IN jacks
21. AERIAL terminal
22. VIDEO OUT jack
23. VIDEO IN jack
24. RF OUT terminal

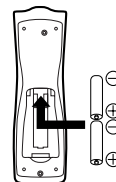
Remote Control



1. EJECT button
2. MENU button
3. NUMBER buttons
4. MEMORY button
5. [PLAY] button
6. RECORD/OTR button
7. [REW] button
8. MUTE button
9. CH(annel). buttons
10. VCR button
11. AUDIO SELECT button
12. STANDBY/ON button
13. STATUS button
14. CLEAR button
15. ALT.CH.button
16. STILL button
17. [F.FWD] button
18. [STOP] button
19. VOL(ume) buttons
20. TV button
21. TIME SEARCH button
22. SPEED/SYSTEM button
23. SLOW button

To insert the batteries

Install two R6 batteries matching the polarity indicated inside the battery compartment.



NOTE

You can use this remote control to operate some PHILIPS TVs. Press [VCR] before pressing VCR feature buttons; press [TV] before pressing TV feature buttons if you have a PHILIPS TV.

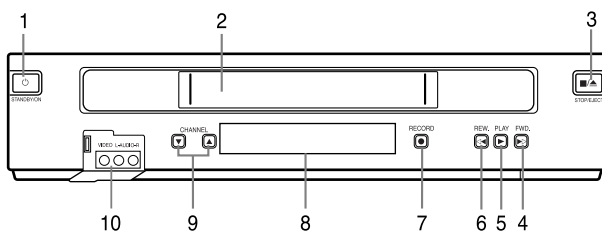
CAUTION

On Battery Replacement

- Do not mix old and new batteries. (Also never mix alkaline batteries with manganese batteries.)

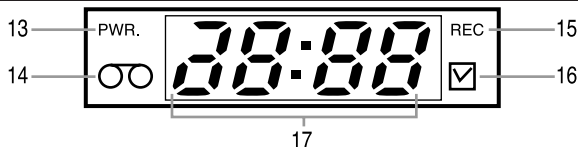
[VR740/75]

Front Panel



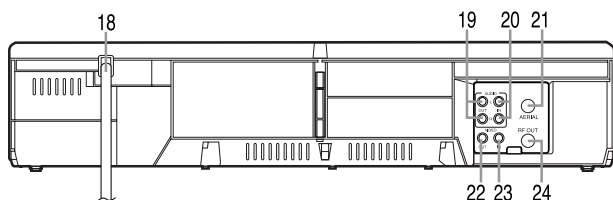
1. STANDBY/ON button
2. Cassette compartment
3. [■/▲] (STOP/EJECT) button
4. [▶▶] (F.FWD) button
5. [▶] (PLAY) button
6. [◀◀] (REW) button
7. RECORD button
8. Display window (See below)
9. CHANNEL (▲/▼) buttons
10. A/V CONNECTORS

Indicator



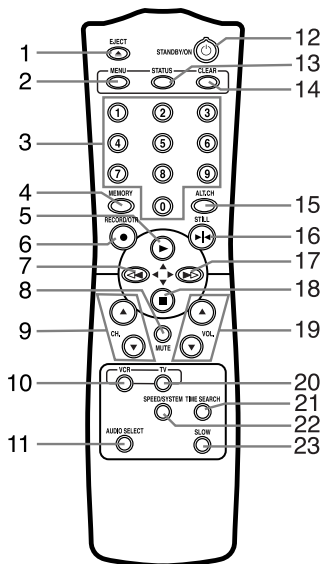
13. PWR. (Power) indicator
14. TAPE IN indicator
15. REC indicator
16. [☑] (Timer) indicator
17. CLOCK indicator

Rear Panel



18. AC power cord
19. AUDIO OUT jacks
20. AUDIO IN jacks
21. AERIAL terminal
22. VIDEO OUT jack
23. VIDEO IN jack
24. RF OUT terminal

Remote Control



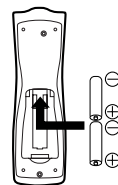
1. EJECT button
2. MENU button
3. NUMBER buttons
4. MEMORY button
5. [▶(▲)] (PLAY) button
6. RECORD/OTR button
7. [◀(▼)] (REW) button
8. MUTE button
9. CH(annel). buttons
10. VCR button
11. AUDIO SELECT button
12. STANDBY/ON button

13. STATUS button
14. CLEAR button
15. ALT.CH.button
16. STILL button
17. [▶▶(▶)] (F.FWD) button
18. [■(▼)] (STOP) button
19. VOL(ume) buttons
20. TV button
21. TIME SEARCH button
22. SPEED/SYSTEM button
23. SLOW button

(*) Doesn't work on this model as the SYSTEM button.

To insert the batteries

Install two R6 batteries matching the polarity indicated inside the battery compartment.



NOTE

You can use this remote control to operate some PHILIPS TVs. Press [VCR] before pressing VCR feature buttons; press [TV] before pressing TV feature buttons if you have a PHILIPS TV.

CAUTION

On Battery Replacement

- Do not mix old and new batteries. (Also never mix alkaline batteries with manganese batteries.)

SIGNAL NAME ABBREVIATIONS

Signal Name	Function
4.43MHz	4.43MHz Clock
A-COM	Audio Head Common
A-IN	Audio Signal Input
A-MODE	Hi-Fi Tape Detection Signal
A-MUTE-H	Audio Mute Control Signal (Mute = "H")
A-OUT	Audio Signal Output
A-PB/REC	Normal Audio Play Back/Record Signal
AE-H	Audio Erase Head
AFC	Automatic Frequency Control Signal
AL+12V	Always +12V with AC Plug Connected
AL+5V	Always +5V with AC Plug Connected
AMPC	CTL AMP Connected Terminal
AMPVcc	AMPVcc
AMPVREF OUT	V-Ref for CTL AMP
AMPVREF _{IN}	V-Ref for CTL AMP
AMPVss	AMPVss
AVcc	A/D Converter Power Input/ Standard Voltage Input
C-CONT	Capstan Motor Control Signal
C-F/R	Capstan Motor FWD/REV Control Signal (FWD="L"/REV="H")
C-FG	Capstan Motor Rotation Detection Pulse
C-ROTA	Color Phase Rotary Changeover Signal
C-SYNC	Composite Synchronized Pulse
CLKSEL	Clock Select (GND)
COLOR-IN	SECAM or MESECAM Chroma Video Input Signal at Super Impose
CTL (+)	Playback/Record Control Signal (+)
CTL (-)	Playback/Record Control Signal (-)
CTLAMPout	To Monitor for CTL AMP Output
D-CONT	Drum Motor Control Signal

Signal Name	Function
D-PFG	Drum Motor Phase/Frequency Generator
D-REC-H	Delayed Record Signal
D-V- SYNC	Dummy V-sync Output
DRV-CLK	LED Clock Driver IC Control Clock
DRV-DATA	LED Clock Driver IC Control Data
DRV-STB	LED Clock Driver IC Chip Select Signal
END-S	Tape End Position Detect Signal
FE-H GND	Ground for Full Erase Head
FF/REW-L	CTL Frequency Characteristics Switching Signal (FF/REW="L")
FSC-IN [4.43MHz]	4.43MHz Clock Input
H-A-COMP	Head Amp Comparator Signal
H-A-SW	Video Head Amp Switching Pulse
Hi-Fi-A	Hi-Fi Audio Head
Hi-Fi-COM	Hi-Fi Audio Head Common
HiFi-H-SW	HiFi Audio Head Switching Pulse
HLF	LPF Connected Terminal (Slicer)
I ² C BUS- SCL	I ² C BUS Control Clock
I ² C BUS- SDA	I ² C BUS Control Data
KEY-1	Key Scan Input Signal 1
KEY-2	Key Scan Input Signal 2
LD-SW	Deck Mode Position Detector Signal
LM-FWD/REV	Loading Motor Control Signal
MOD-A	Modulator Audio Output Signal
N-A-PB	Normal Audio Playback
N-A-REC	Normal Audio Recording
OSC _{IN}	Clock Input for letter size
OSC _{OUT}	Clock Output for letter size
OSD-V-IN	OSD Video Signal Input
OSD-V-OUT	OSD Video Signal Output
OSDVcc	OSDVcc
OSDVss	OSDVss
P-DOWN-L	Power Voltage Down Detector Signal

Signal Name	Function
P-OFF-H	Power Off at High
P-ON+5V	+5V at Power-On Signal
P-ON-L	Power On Signal at Low
P80/C	P80/C Terminal
PG-DELAY	Video Head Switching Pulse Signal Adjusted Voltage
POW-SAF	P-ON Power Detection Input Signal
REC-SAF-SW	Recording Safety SW Detect (With Record tab="L"/With out Record tab="H")
REMOCON-IN	Remote Control Sensor
RESET	System Reset Signal (Reset="L")
RESET +5V	+5V at System Reset Signal
RF-SW	Video Head Switching Pulse
SIF	Intermediate Frequency
ST-S	Tape Start Position Detector Signal
T-REEL	Take Up Reel Rotation Signal
TIMER+5V	+5V at Timer
TU-AUDIO	Tuner Audio Input Signal
TU-VIDEO	Tuner Video Input Signal
TUN-SW1	Tuner System Control Signal Output
TUN-SW2	Tuner System Control Signal Output
V-ENV	Video Envelope Comparator Signal
V-IN	Video Signal Input
V-OUT	Video Signal Output
Vcc	Vcc
VIDEO	Video Signal
Vss	Vss(GND)
X-IN	Main Clock Input
X-OUT	Main Clock Input
XC-IN	Sub Clock
XC-OUT	Sub Clock

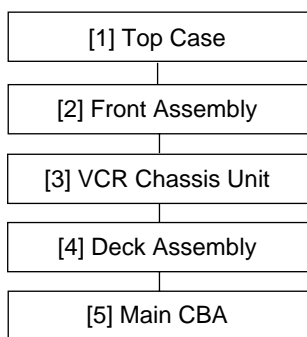
CABINET DISASSEMBLY INSTRUCTIONS

Comparison Chart of Models and Marks

Model	Mark
VR340/55	A
VR340/75	B
VR740/55	C
VR740/75	D

1. Disassembly Flowchart

This flowchart indicates the disassembly steps to gain access to item(s) to be serviced. When reassembling, follow the steps in reverse order. Bend, route, and dress the cables as they were originally.



2. Disassembly Method

ID/ LOC. No.	PART	REMOVAL		
		Fig. No.	REMOVE/*UNHOOK/ UNLOCK/RELEASE/ UNPLUG/DESOLDER	Note
[1]	Top Case	1	3(S-1)	-
[2]	Front Assembly	2	*3(L-1), *4(L-2)	-
[3]	VCR Chassis Unit	3	5(S-2) , 2(S-3)---[Mark: C, D]	1
[4]	Deck Assembly	4,5	3(S-4), 2(W-1), Desolder	2,3
[5]	Main CBA	4,5	-----	-

↓
(1)

↓
(2)

↓
(3)

↓
(4)

↓
(5)

- (1): Identification (location) No. of parts in the figures
 (2): Name of the part
 (3): Figure Number for reference
 (4): Identification of parts to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.
 P=Spring, L=Locking Tab, S=Screw, CN=Connector
 *=Unhook, Unlock, Release, Unplug, or Desolder
 e.g. 2(S-2) = two Screws (S-2),
 2(L-2) = two Locking Tabs (L-2)
 (5): Refer to "Reference Notes."

Reference Notes

CAUTION: Locking Tabs (L-1) and (L-2) are fragile. Be careful not to break them.

1. Remove five Screws (S-2), two Screws (S-3) and Screw (S-4). Then, slowly lift the VCR Chassis Unit (Deck Assembly, Jack CBA and Main CBA) up.
2. When reassembling, solder wire jumpers as shown in Fig. 5.
3. Before installing the Deck Assembly, be sure to place the pin of LD-SW on Main CBA as shown in Fig. 6. Then, install the Deck Assembly while aligning the hole of Cam Gear with the pin of LD-SW, the shaft of Cam Gear with the hole of LD-SW as shown in Fig. 6.

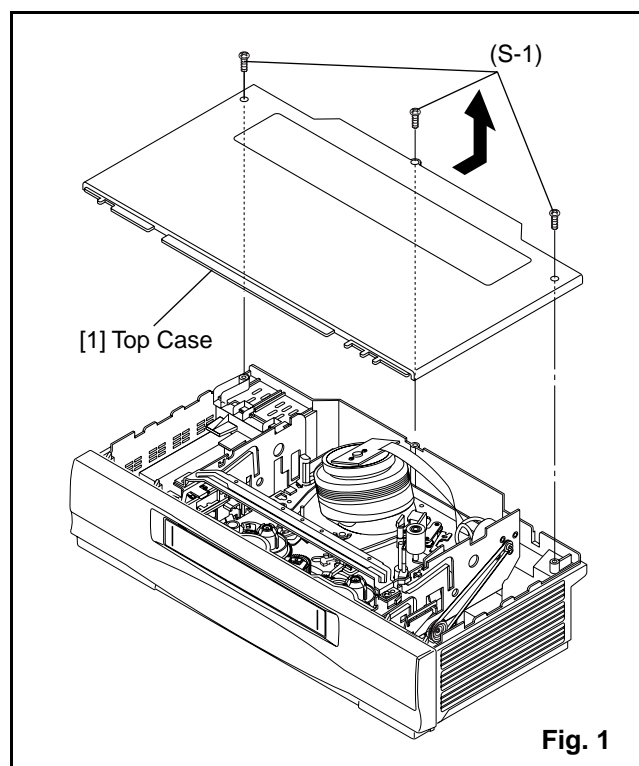


Fig. 1

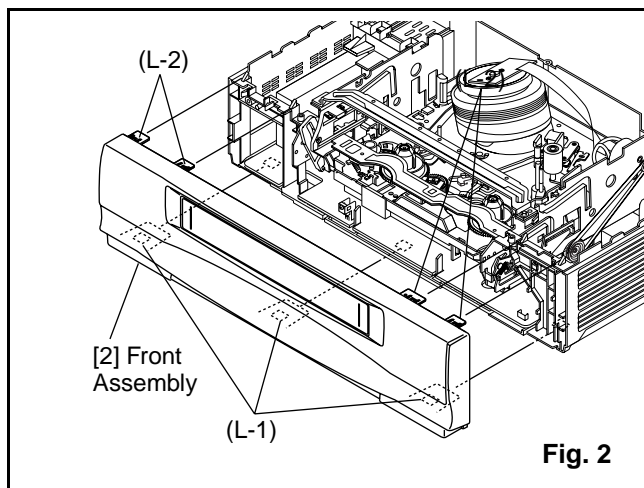


Fig. 2

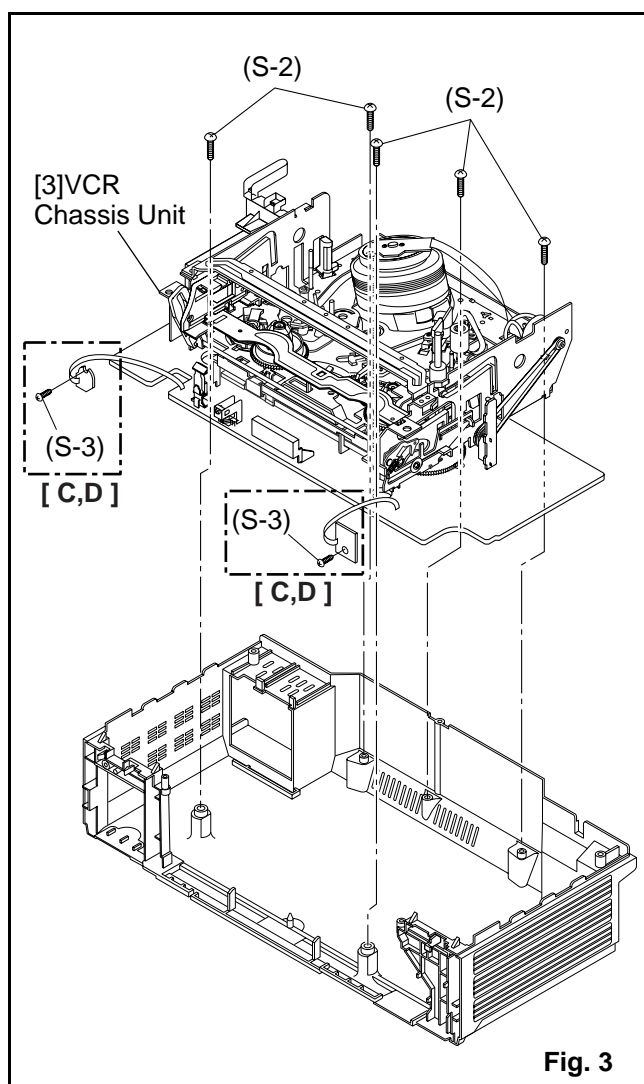


Fig. 3

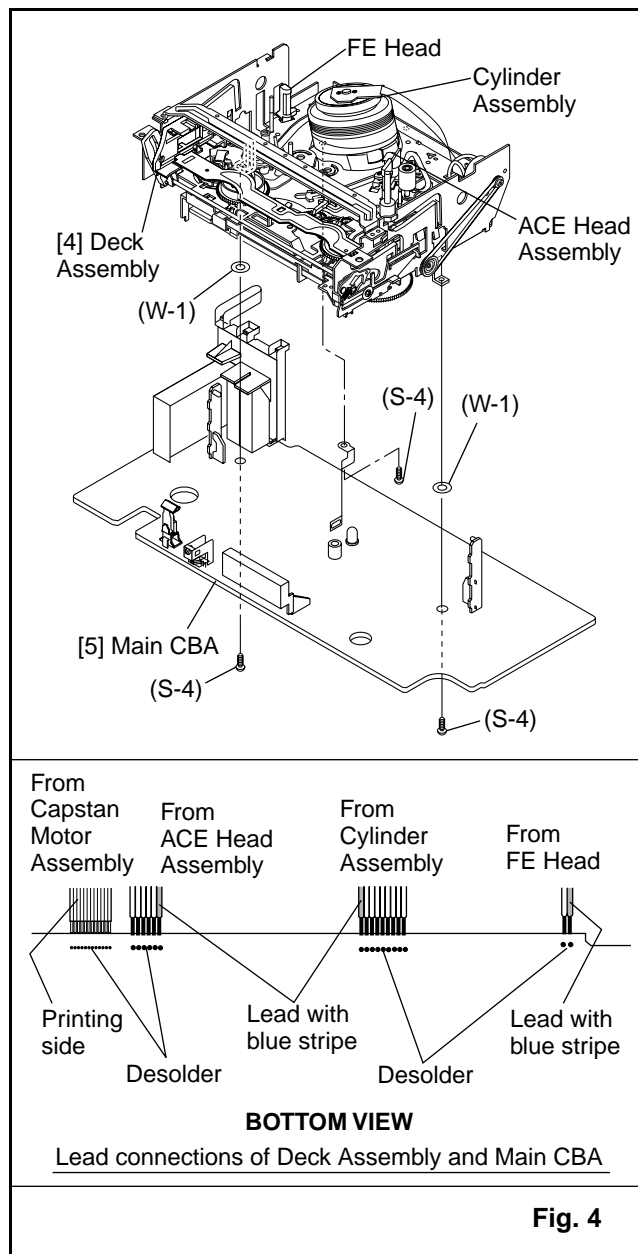
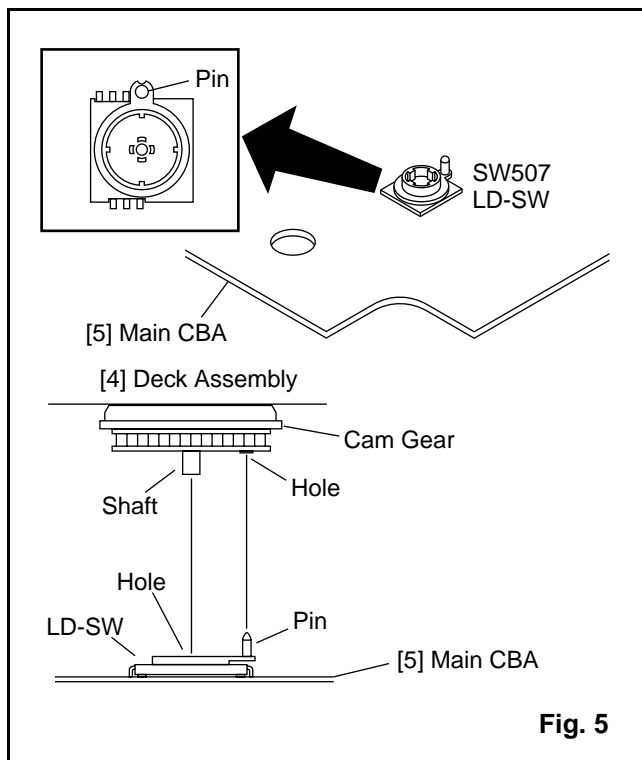


Fig. 4



ELECTRICAL ADJUSTMENT INSTRUCTIONS

General Note: "CBA" is an abbreviation for "Circuit Board Assembly."

NOTE:

1. Electrical adjustments are required after replacing circuit components and certain mechanical parts. It is important to do these adjustments only after all repairs and replacements have been completed. Also, do not attempt these adjustments unless the proper equipment is available.
2. To perform these alignment / confirmation procedures, make sure that the tracking control is set in the center position: Press either "▼" or "▲" button on the remote control unit first, then the "PLAY" button (Front Panel only).

Test Equipment Required

1. Oscilloscope: Dual-trace with 10:1 probe,
V-Range: 0.001~50V/Div.,
F-Range: DC~AC-20MHz
2. Alignment Tape (4822 395 10283)

Head Switching Position Adjustment

Purpose:

To determine the Head Switching point during playback.

Symptom of Misadjustment:

May cause Head Switching noise or vertical jitter in the picture.

Test point	Adj.Point	Mode	Input
TP751(V-OUT) TP502(RF-SW) GND	VR501 (Switching Point) (MAIN CBA)	PLAY (SP)	-----
Tape	Measurement Equipment	Spec.	
4822 395 10283	Oscilloscope	6.5H±1H (412.7µs±60µs)	

Connections of Measurement Equipment

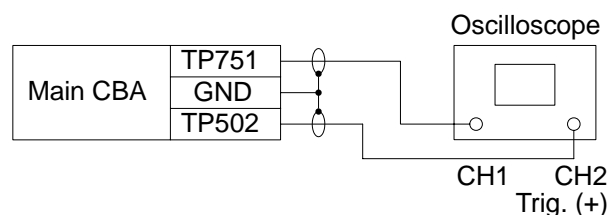
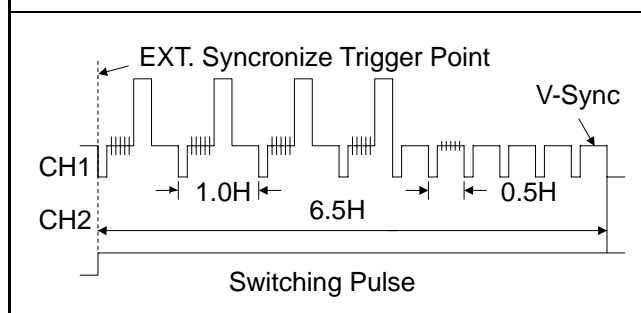


Figure 1

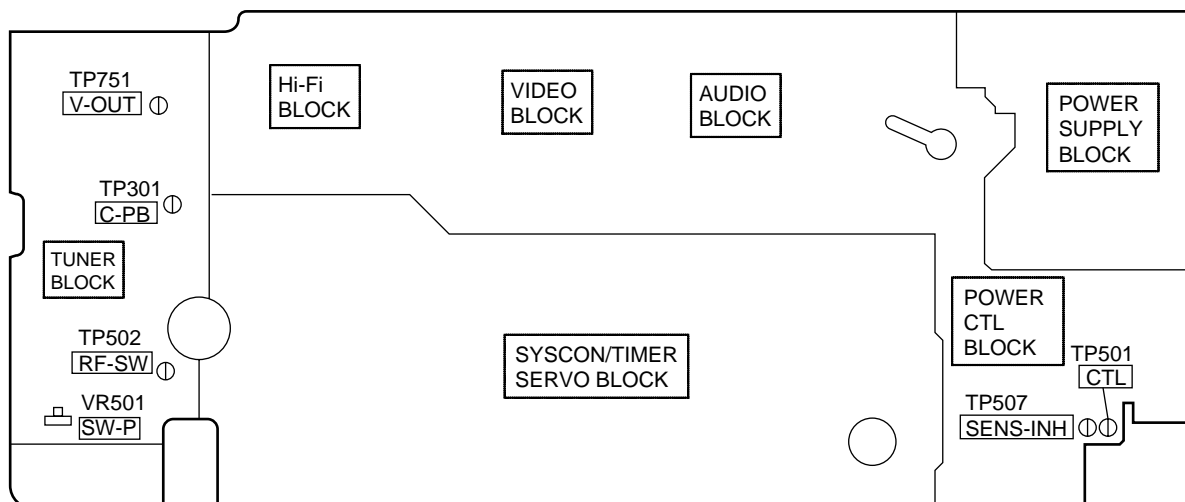


Reference Notes:

Playback the Alignment tape and adjust VR501 so that the V-sync front edge of the CH1 video output waveform is at the 6.5H(412.7µs) delayed position from the rising edge of the CH2 head switching pulse waveform.

Adjustment Points and Test Points

Main CBA Top View



TEST POINT INFORMATION

①: Indicates a test point with a jumper wire across a hole in the PCB.

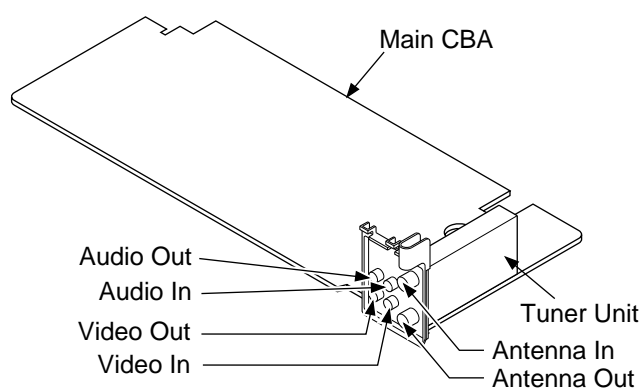
TEST POINTS NOT USED IN ELECTRICAL ADJUSTMENTS

Test Point	Used in:	Page No.
TP301	Mechanical Alignment Procedures	2-3-3, 2-3-4
TP501	Mechanical Alignment Procedures	2-3-3, 2-3-4
TP507	Preparation for Servicing	1-5-1

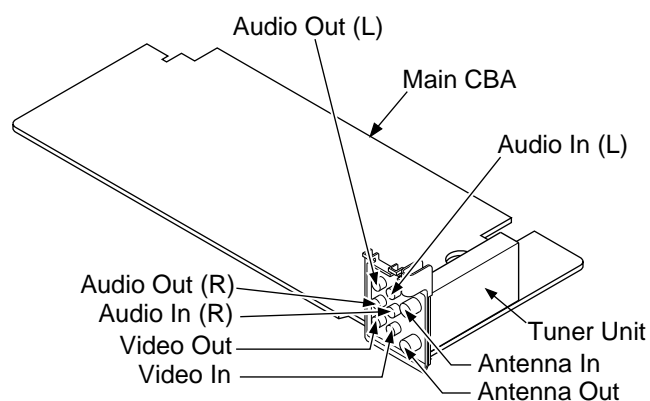
Comparison Chart of Models and Marks

Model	Mark
VR340/55	A
VR340/75	B
VR740/55	C
VR740/75	D

[A, B]



[C, D]



BLOCK DIAGRAMS

Servo/System Control Block Diagram

Comparison Chart of Models & Marks

Model	Mark
VR340/55	A
VR340/75	B
VR740/55	C
VR740/75	D

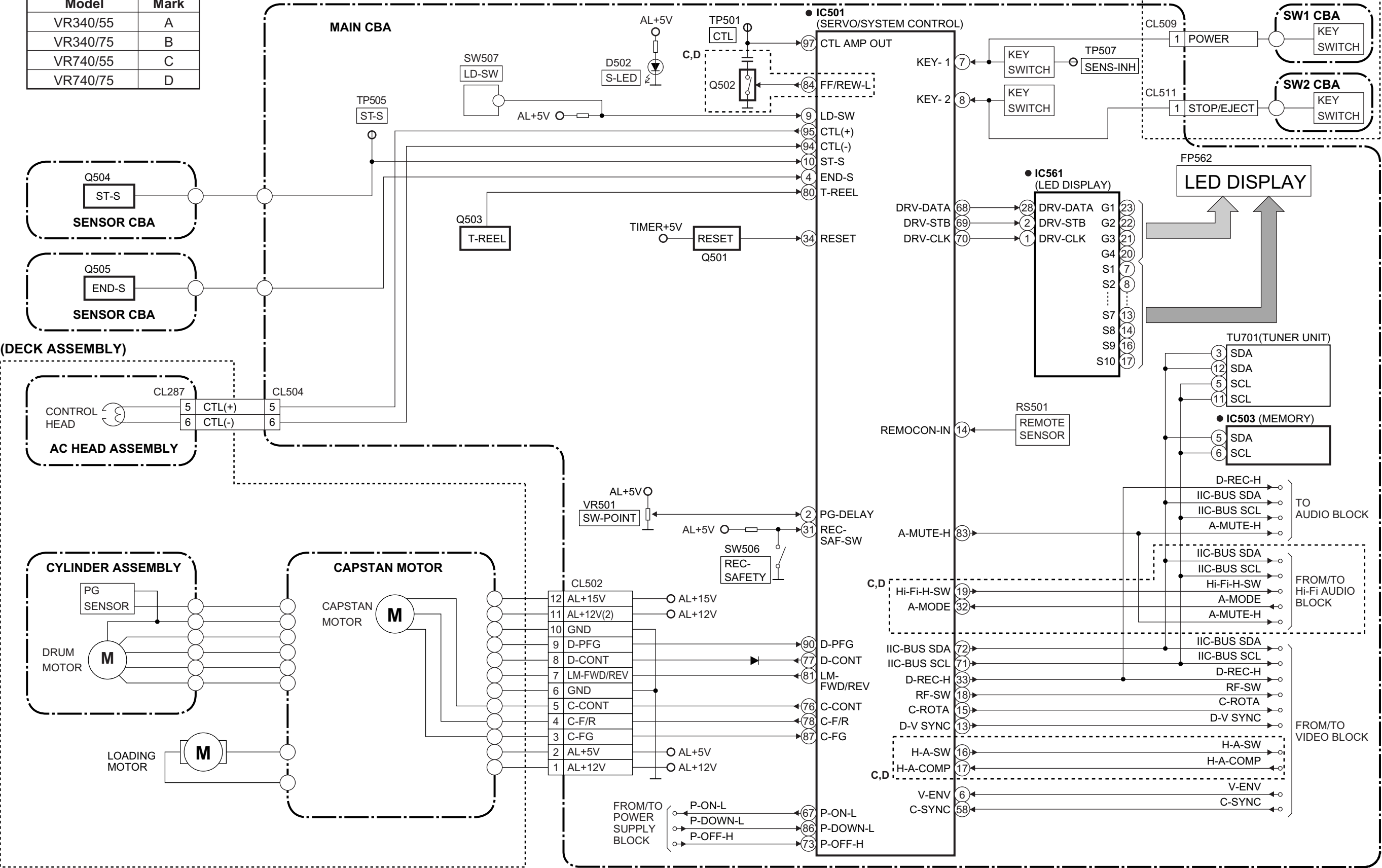
NOTE FOR WIRE CONNECTORS:

- 1. PREFIX SYMBOL "CN" MEANS CONNECTOR. (CAN DISCONNECT AND RECONNECT.)
- 2. PREFIX SYMBOL "CL" MEANS WIRE-SOLDER HOLES OF THE PCB. (WIRE IS SOLDERED DIRECTLY.)

TEST POINT INFORMATION

- ⊕ :INDICATES A TEST POINT WITH A JUMPER WIRE ACROSS A HOLE IN THE PCB.
- ⊞ :USED TO INDICATE A TEST POINT WITH A COMPONENT LEAD ON FOIL SIDE.
- ⊗ :USED TO INDICATE A TEST POINT WITH NO TEST PIN.
- :USED TO INDICATE A TEST POINT WITH A TEST PIN.

"●" = SMD



Video Block Diagram

"●" = SMD

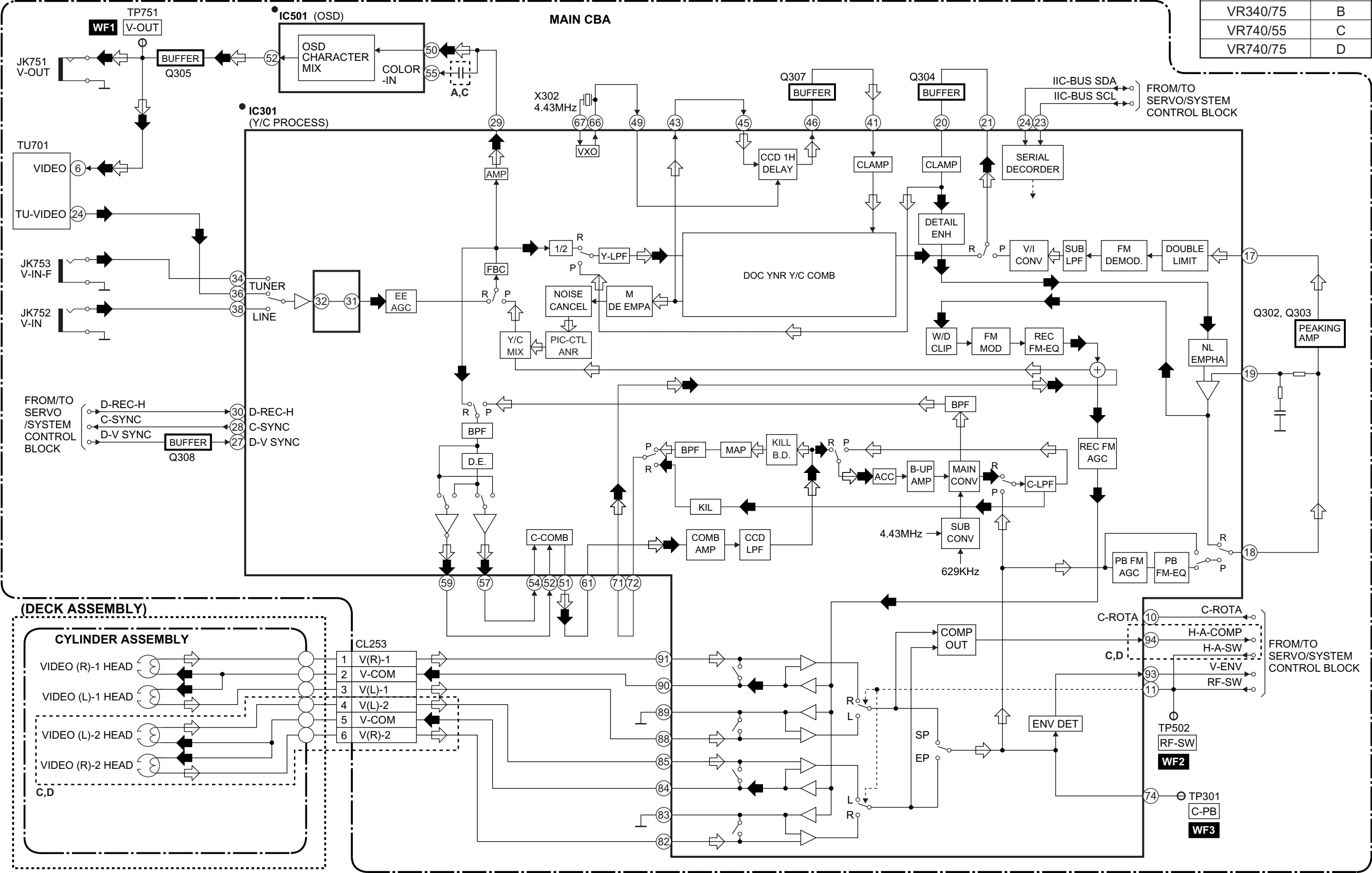
REC-VIDEO SIGNAL PB-VIDEO SIGNAL MODE: SP/REC

NOTE FOR WIRE CONNECTORS:
1. PREFIX SYMBOL "CN" MEANS CONNECTOR.
(CAN DISCONNECT AND RECONNECT.)
2. PREFIX SYMBOL "CL" MEANS WIRE-SOLDER
HOLES OF THE PCB.
(WIRE IS SOLDERED DIRECTLY.)

TEST POINT INFORMATION
① :INDICATES A TEST POINT WITH A JUMPER WIRE ACROSS A HOLE IN THE PCB.
⇨ :USED TO INDICATE A TEST POINT WITH A COMPONENT LEAD ON FOIL SIDE.
⊗ :USED TO INDICATE A TEST POINT WITH NO TEST PIN.
● :USED TO INDICATE A TEST POINT WITH A TEST PIN.

Comparison Chart of Models & Marks

Model	Mark
VR340/55	A
VR340/75	B
VR740/55	C
VR740/75	D



Audio Block Diagram

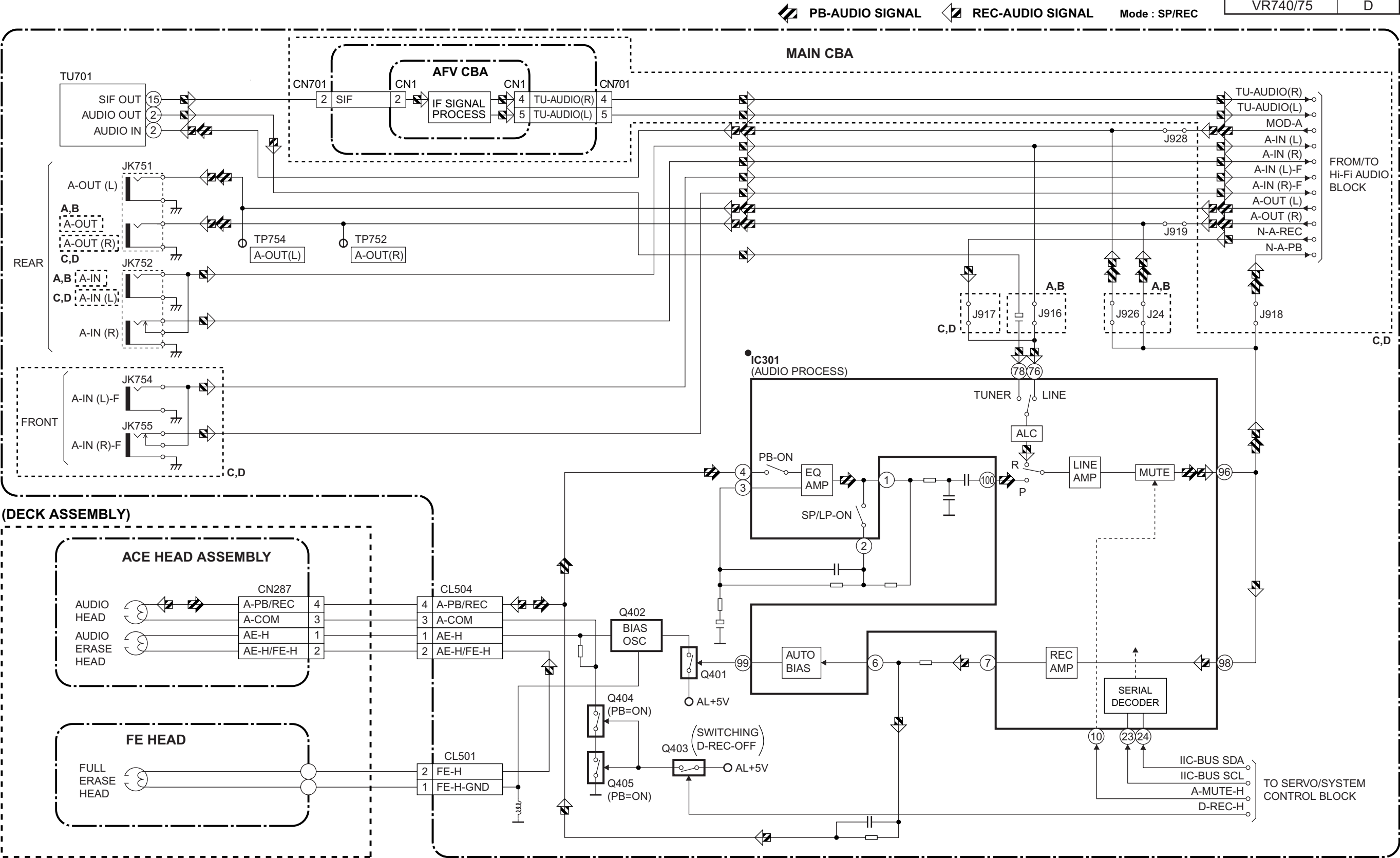
"●" = SMD

NOTE FOR WIRE CONNECTORS:
1. PREFIX SYMBOL "CN" MEANS CONNECTOR.
(CAN DISCONNECT AND RECONNECT.)
2. PREFIX SYMBOL "CL" MEANS WIRE-SOLDER
HOLES OF THE PCB.
(WIRE IS SOLDERED DIRECTLY.)

TEST POINT INFORMATION
① :INDICATES A TEST POINT WITH A JUMPER WIRE ACROSS A HOLE IN THE PCB.
⊢ :USED TO INDICATE A TEST POINT WITH A COMPONENT LEAD ON FOIL SIDE.
⊙ :USED TO INDICATE A TEST POINT WITH NO TEST PIN.
● :USED TO INDICATE A TEST POINT WITH A TEST PIN.

Comparison Chart of Models & Marks

Model	Mark
VR340/55	A
VR340/75	B
VR740/55	C
VR740/75	D



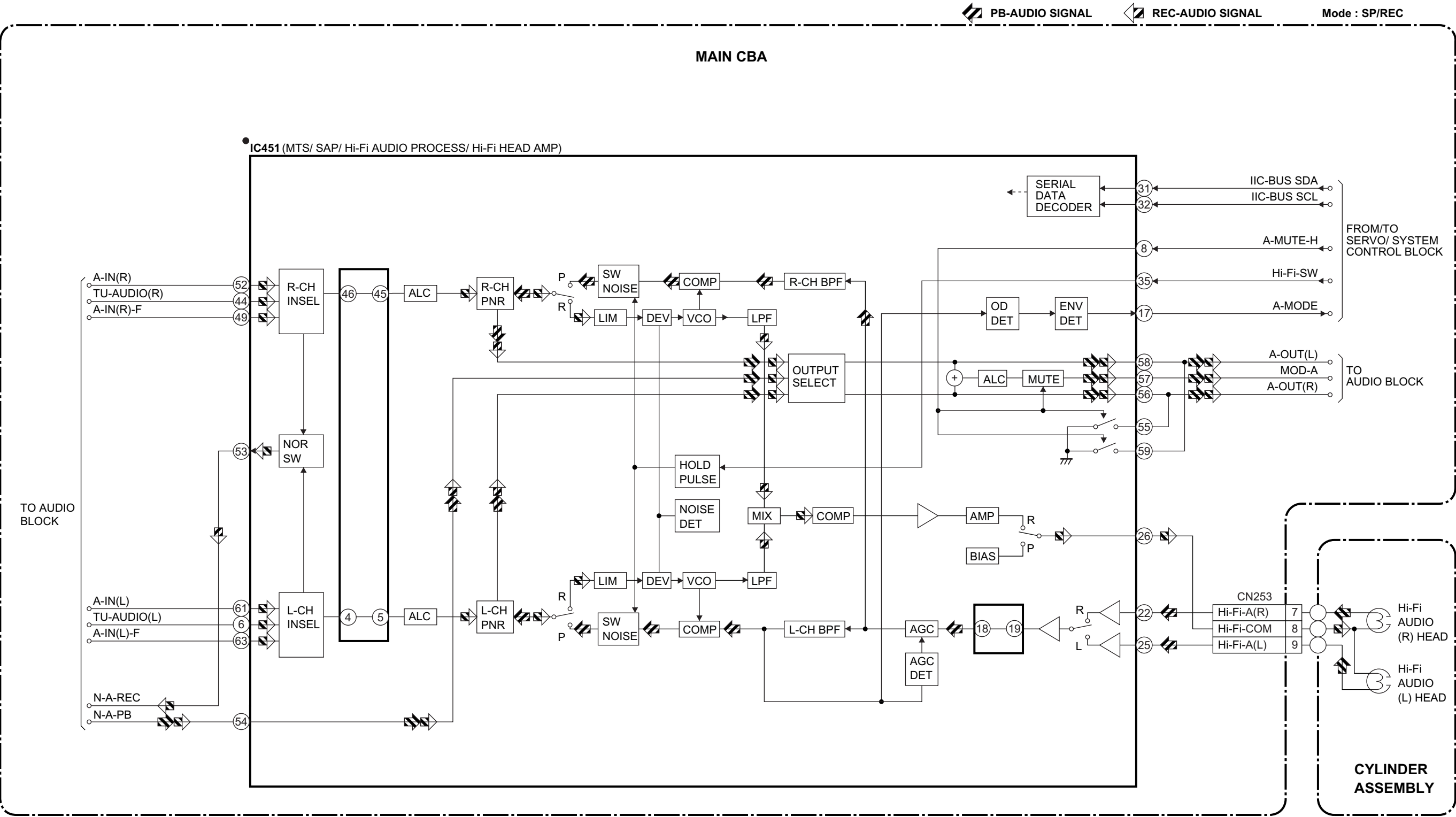
Hi-Fi Audio Block Diagram (C, D)

NOTE FOR WIRE CONNECTORS:
1. PREFIX SYMBOL "CN" MEANS CONNECTOR.
(CAN DISCONNECT AND RECONNECT.)
2. PREFIX SYMBOL "CL" MEANS WIRE-SOLDER
HOLES OF THE PCB.
(WIRE IS SOLDERED DIRECTLY.)

"●" = SMD

TEST POINT INFORMATION
⊕ :INDICATES A TEST POINT WITH A JUMPER WIRE ACROSS A HOLE IN THE PCB.
⊞ :USED TO INDICATE A TEST POINT WITH A COMPONENT LEAD ON FOIL SIDE.
⊗ :USED TO INDICATE A TEST POINT WITH NO TEST PIN.
● :USED TO INDICATE A TEST POINT WITH A TEST PIN.

Model	Mark
VR340/55	A
VR340/75	B
VR740/55	C
VR740/75	D



Power Supply Block Diagram

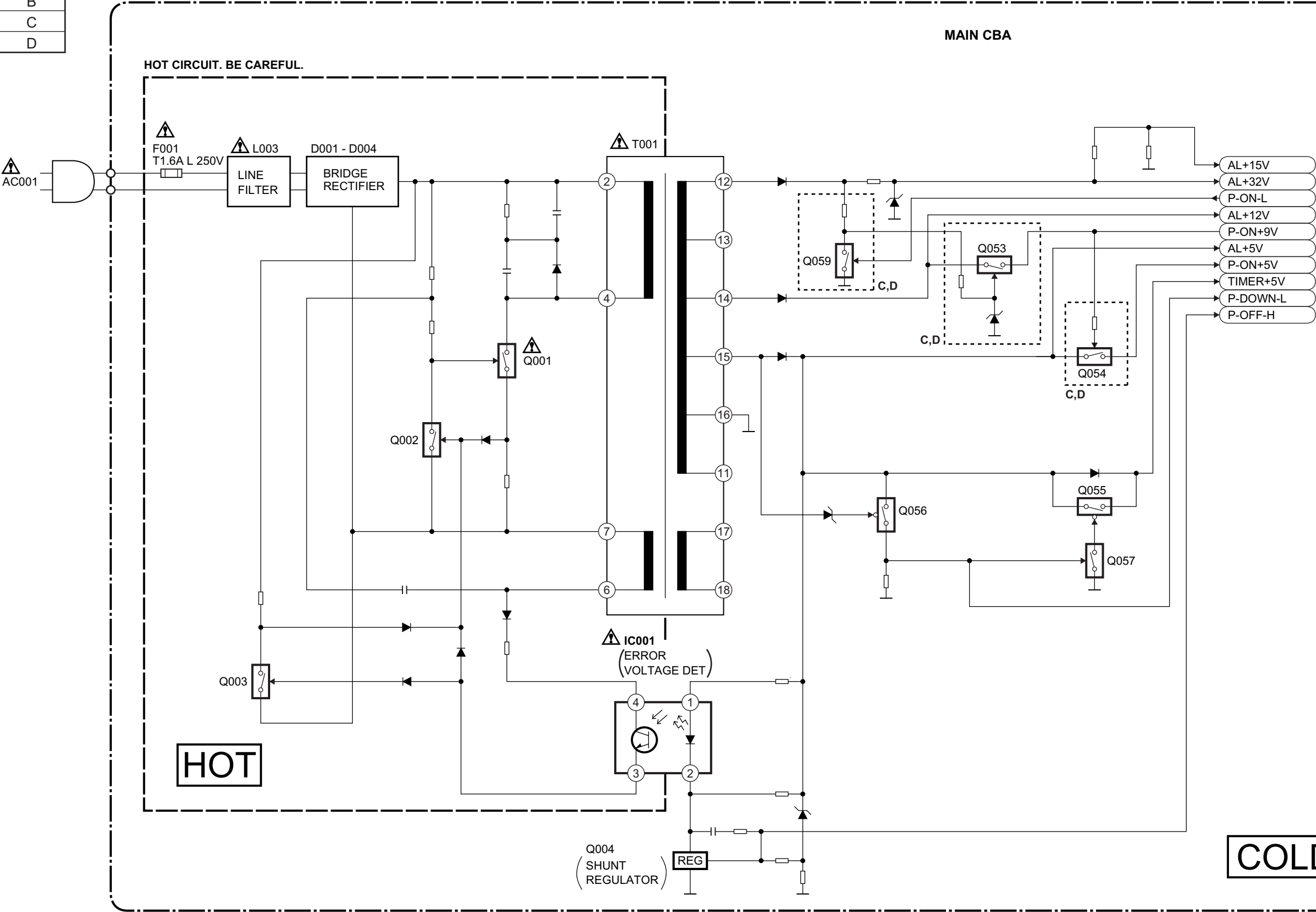
Comparison Chart of Models & Marks

Model	Mark
VR340/55	A
VR340/75	B
VR740/55	C
VR740/75	D

NOTE :
The voltage for parts in hot circuit is measured using hot GND as a common terminal.

CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE T1.6AL/250V FUSE.

CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F001) is blown, check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.



SCHEMATIC DIAGRAMS / CBA'S AND TEST POINTS

Standard Notes

WARNING

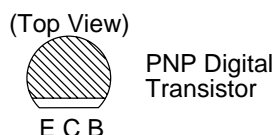
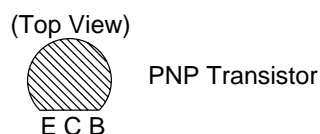
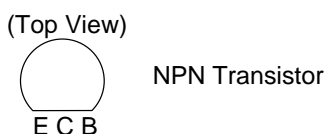
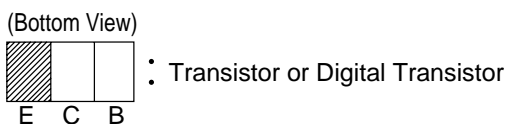
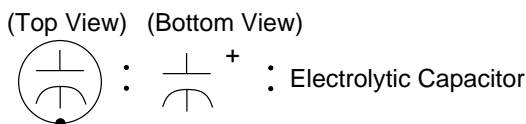
Many electrical and mechanical parts in this chassis have special characteristics. These characteristics often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the mark "△" in the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire, or other hazards.

Capacitor Temperature Markings

Mark	Capacity change rate	Standard temperature	Temperature range
(B)	±10%	20°C	-25~+85°C
(F)	+30 - 80%	20°C	-25~+85°C
(SR)	±15%	20°C	-25~+85°C
(Y)	±22.5%	20°C	-25~+85°C

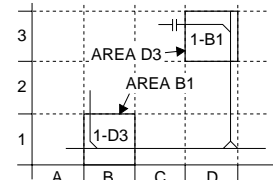
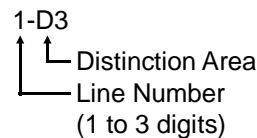
Capacitors and transistors are represented by the following symbols.

< PCB Symbols >



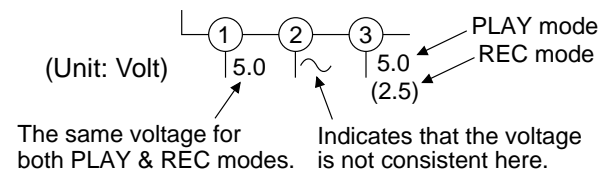
Notes:

1. Do not use the part number shown on these drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since these drawings were prepared.
2. To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.
3. Prefix symbol "CN" means "connector" (can disconnect and reconnect).
Prefix symbol "CL" means "wire-solder holes of the PCB" (wire is soldered directly).
4. How to read converged lines.



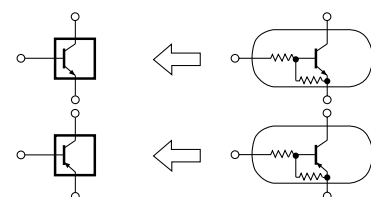
Examples:

- (1). "1-D3" means that line number "1" goes to area "D3."
- (2). "1-B1" means that line number "1" goes to area "B1."
5. All resistance values are indicated in ohms ($K=10^3$, $M=10^6$).
6. Resistor wattages are 1/4W or 1/6W unless otherwise specified.
7. All capacitance values are indicated in μF ($P=10^{-6} \mu F$).
8. All voltages are DC voltages unless otherwise specified.
9. Voltage indications for PLAY and REC modes on the schematics are as shown below.



< Schematic Diagram Symbols >

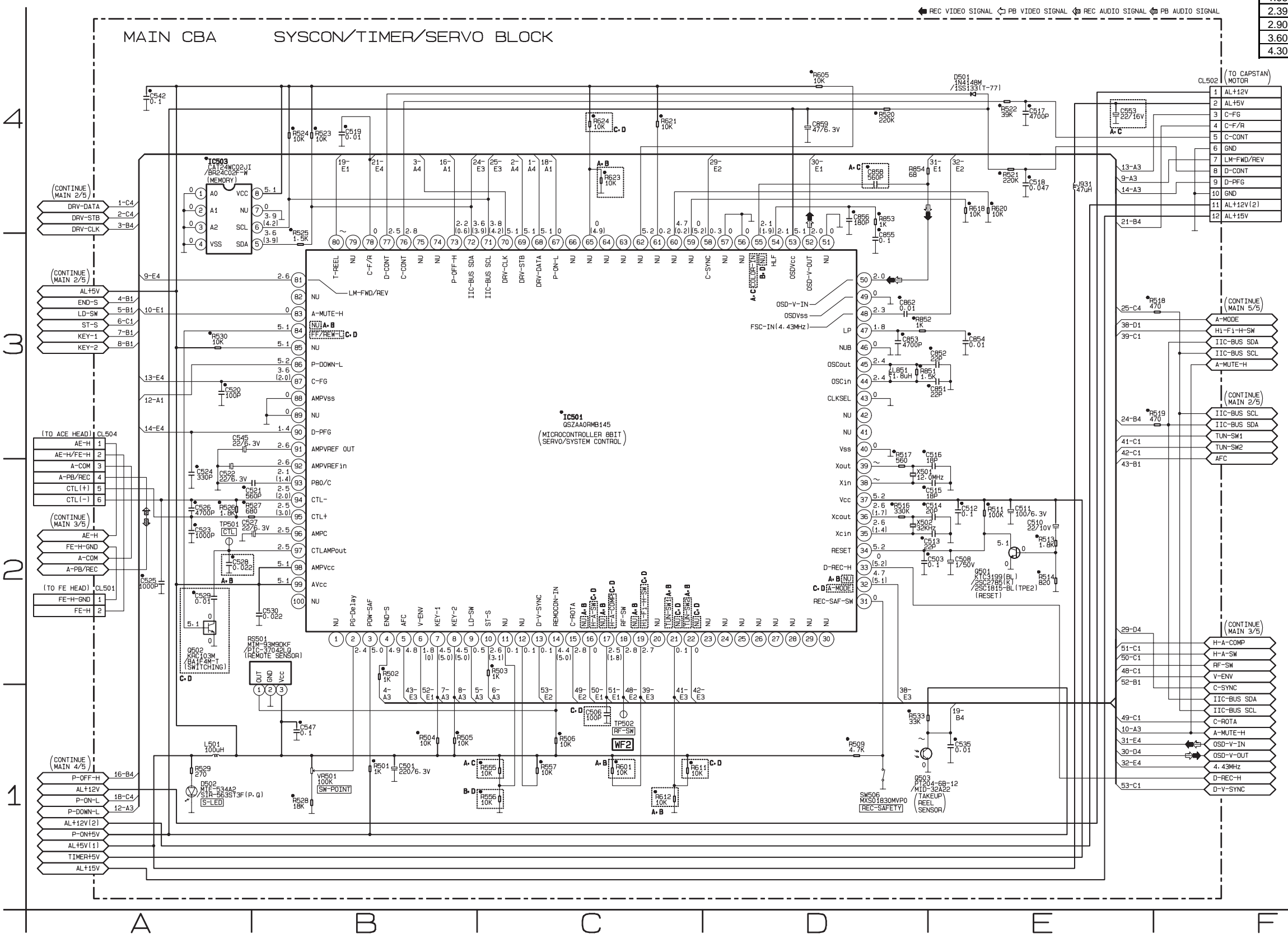
Digital Transistor



Main 1/5 Schematic Diagram Parts Location Guide

Ref No.	Position	Ref No.	Position	Ref No.	Position
CAPACITORS		CAPACITORS		RESISTORS	
C501	B-1	C858	D-4	R524	B-4
C503	C-1	C859	D-4	R525	B-3
C506	C-1	C862	D-3	R526	A-2
C508	E-2	DIODES		R527	A-2
C510	E-2	D501	E-4	R528	B-1
C511	E-2	D502	A-1	R529	A-1
C512	E-2	ICS		R530	A-3
C513	E-2	IC501	C-3	R533	D-1
C514	E-2	IC503	A-4	R555	C-1
C515	E-2	COILS		R556	C-1
C516	E-2	J931	E-4	R557	C-1
C517	E-4	L501	A-1	R601	C-1
C518	E-4	L851	D-3	R605	D-4
C519	B-4	TRANSISTORS		R611	C-1
C520	A-3	Q501	E-2	R612	C-1
C521	A-2	Q502	A-2	R618	E-4
C522	A-2	Q503	D-1	R620	E-4
C523	A-2	RESISTORS		R621	C-4
C524	A-2	R501	B-1	R623	C-4
C525	A-2	R502	B-2	R624	C-4
C526	A-2	R503	C-2	R851	D-3
C527	B-2	R504	B-1	R852	D-3
C528	A-2	R505	B-1	R853	D-4
C529	A-2	R506	C-1	R854	D-4
C530	B-2	R509	D-1	SWITCHES	
C535	E-1	R511	E-2	SW506	D-1
C545	A-3	R513	E-2	VARIABLE RESISTORS	
C542	A-4	R514	E-2	VR501	B-1
C547	B-1	R516	D-2	CRYSTAL OSCILLATORS	
C553	E-4	R517	D-3	X501	D-2
C851	E-3	R518	F-3	X502	D-2
C852	E-3	R519	F-3	MISCELLANEOUS	
C853	D-3	R520	D-4	RS501	B-2
C854	E-3	R521	E-4	TEST POINTS	
C855	D-3	R522	E-4	TP501	A-2
C856	D-4	R523	B-4	TP502	C-1

Main 1/5 Schematic Diagram



MODE: SP/REC
PLAY MODE
REC MODE
THE SAME VOLTAGE FOR BOTH PLAY & REC MODES.
INDICATES THAT THE VOLTAGE IS NOT CONSISTENT HERE.

Comparison Chart of Models and Marks

MODEL	MARK
VR340/55	A
VR340/75	B
VR740/55	C
VR740/75	D

IC501 KEY VOLTAGE CHART

	KEY 1 (7 PIN)	KEY 2 (8 PIN)
0.00 ~ 0.51V	POWER	STOP/EJECT
0.51 ~ 0.92V	CH DOWN	REW
0.92 ~ 1.27V	CH UP	PLAY
1.27 ~ 1.61V	-----	FF
1.61 ~ 1.98V	-----	-----
1.98 ~ 2.39V	REC/OTR	-----
2.39 ~ 2.90V	-----	-----
2.90 ~ 3.60V	S-INH	-----
3.60 ~ 4.30V	-----	-----
4.30 ~ 5.00V	KEY OFF	KEY OFF

A vertical axis with tick marks and labels 1, 2, 3, and 4.

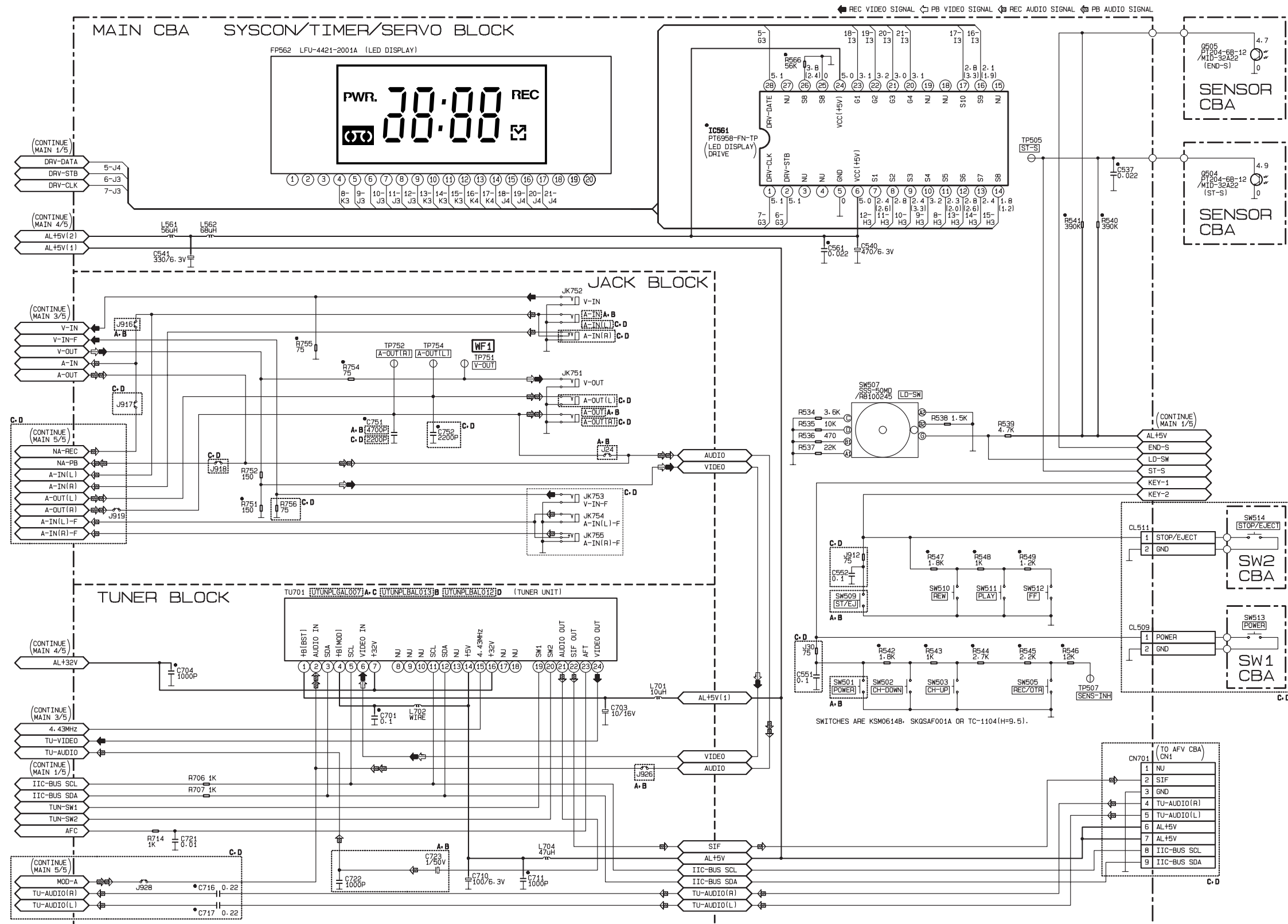
MODE: SP/REC

THE SAME VOLTAGE FOR BOTH PLAY & REC MODES.

INDICATES THAT THE VOLTAGE IS NOT CONSISTENT HERE.

PLAY MODE
REC MODE

MODEL	MARK
VR340/55	A
VR340/75	B
VR740/55	C
VR740/75	D



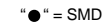
MAIN 2/5 Schematic Diagram Parts Location Guide

Ref No.	Position	Ref No.	Position
CAPACITORS		RESISTORS	
C537	K-4	R542	J-2
C540	J-3	R543	J-2
C541	G-3	R544	K-2
C551	J-2	R545	K-2
C552	J-2	R546	K-2
C561	J-3	R547	J-2
C701	H-2	R548	K-2
C703	I-2	R549	K-2
C704	H-2	R566	J-4
C710	H-1	R706	G-1
C711	I-1	R707	G-1
C716	G-1	R714	G-1
C717	G-1	R751	H-2
C721	G-1	R752	H-2
C722	H-1	R754	H-3
C723	H-1	R755	H-3
C751	H-3	R756	H-2
C752	H-3	SWITCHES	
CONNECTORS		SW501	J-2
CN701	K-1	SW502	J-2
DIODES		SW503	K-2
ICS		SW505	K-2
IC561	J-4	SW507	J-3
COILS		SW509	J-2
L561	G-3	SW510	K-2
L562	G-3	SW511	K-2
L701	I-2	SW512	K-2
L702	I-1	SW513	L-2
L704	G-1	SW514	L-2
TRANSISTORS		MISCELLANEOUS	
Q504	L-4	FP562	H-4
Q505	L-4	JK751	I-3
RESISTORS		JK752	I-3
J30	J-2	JK753	I-2
J912	J-2	JK754	I-2
R534	J-3	JK755	I-2
R535	J-3	TU701	H-2
R536	J-3	TEST POINTS	
R537	J-3	TP505	K-4
R538	K-3	TP507	K-2
R539	K-3	TP751	I-3
R540	K-4	TP752	H-3
R541	K-4	TP754	H-3

MAIN 3/5 Schematic Diagram Parts Location Guide

Ref No.	Position	Ref No.	Position	Ref No.	Position	Ref No.	Position
CAPACITORS		CAPACITORS		COILS		RESISTORS	
C253	N-3	C342	Q-4	L306	Q-4	R323	Q-1
C255	N-3	C344	P-4	L308	N-1	R324	O-2
C256	N-2	C345	P-4	L403	N-1	R325	Q-2
C301	O-2	C346	P-4	TRANSISTORS		R327	Q-2
C302	O-2	C348	O-4	Q301	Q-4	R328	Q-3
C303	O-2	C349	O-4	Q302	O-1	R329	O-2
C304	O-1	C350	O-4	Q303	O-1	R330	P-1
C305	P-1	C351	O-4	Q304	P-1	R332	O-4
C306	O-1	C352	O-4	Q305	Q-2	R334	P-4
C307	O-1	C355	Q-2	Q307	Q-3	R335	P-4
C308	O-1	C361	Q-2	Q308	Q-1	R336	O-4
C309	P-4	C362	Q-1	Q401	M-2	R340	Q-1
C310	P-1	C401	N-2	Q402	N-1	R344	Q-2
C311	P-2	C403	N-2	Q403	N-1	R372	Q-2
C312	P-1	C404	N-2	Q405	N-1	R401	N-2
C313	P-1	C405	N-2	RESISTORS		R402	N-2
C314	P-1	C406	N-2	R253	N-2	R403	N-2
C315	Q-1	C407	M-2	R256	N-2	R404	N-2
C317	Q-2	C409	N-2	R257	N-2	R405	N-2
C318	Q-2	C410	M-1	R302	O-1	R406	N-2
C319	Q-2	C411	N-1	R303	O-2	R408	N-2
C320	Q-2	C412	N-1	R304	O-2	R409	N-2
C321	Q-2	C413	O-2	R305	O-1	R410	N-2
C323	Q-2	C414	O-2	R306	O-1	R414	N-2
C324	Q-2	C416	O-4	R307	O-1	R415	N-2
C326	Q-3	C420	N-4	R308	O-1	R416	N-2
C327	Q-3	C421	N-4	R309	O-1	R417	N-1
C328	Q-3	C423	N-4	R310	O-1	R418	N-1
C330	Q-3	C424	N-4	R311	O-1	R419	O-2
C331	Q-3	C430	O-4	R312	O-1	R420	O-2
C332	Q-3	DIODES		R313	P-2	R421	N-4
C333	Q-3	D301	P-1	R314	P-2	R422	N-4
C334	Q-3	ICS		R315	P-1	R425	N-4
C335	Q-3	IC301	N-2	R316	P-1	R430	O-4
C336	Q-4	COILS		R317	P-1	R431	O-4
C337	Q-4	L251	M-3	R318	P-1	R432	N-1
C338	Q-4	L301	Q-4	R319	P-1	CRYSTAL OSCILLATORS	
C339	P-4	L302	O-1	R320	Q-1	X302	O-4
C340	P-4	L303	O-1	R321	P-2	TEST POINTS	
C341	P-4	L304	P-1	R322	Q-4	TP301	O-4

4
—
3
—
2
—
1



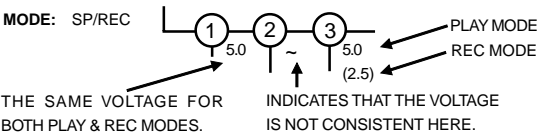
MODEL	MARK
VR340/55	A
VR340/75	B
VR740/55	C
VR740/75	D

Main 4/5 Schematic Diagram

CAUTION !
For continued protection against fire hazard,
replace only with the same type fuse.

NOTE :
The voltage for parts in hot circuit is measured using
hot GND as a common terminal.

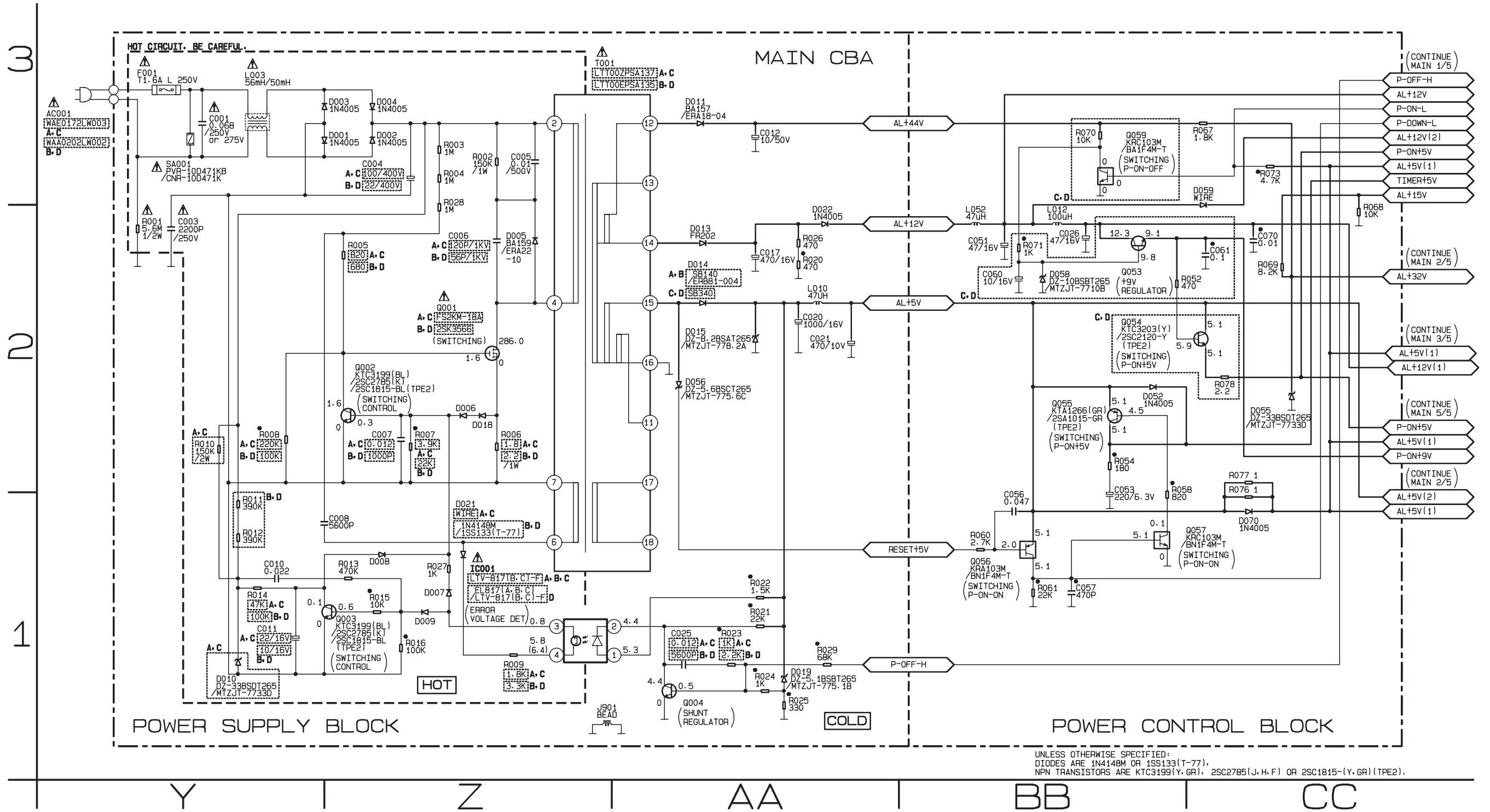
CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F1001) is blown, check to see that all components in the power supply
circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.



"●" = SMD

Comparison Chart of Models and Marks

MODEL	MARK
VR340/55	A
VR340/75	B
VR740/55	C
VR740/75	D



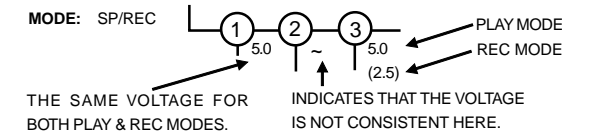
MAIN 4/5 Schematic Diagram Parts Location Guide

Ref No.	Position	Ref No.	Position	Ref No.	Position
CAPACITORS		DIODES		RESISTORS	
C001	S-3	D019	U-1	R010	S-2
C003	S-2	D021	T-1	R011	S-1
C004	T-3	D022	U-2	R012	S-1
C005	T-3	D052	V-2	R013	T-1
C006	T-2	D055	W-2	R014	S-1
C007	T-2	D056	U-2	R015	T-1
C008	T-1	D058	V-2	R016	T-1
C010	S-1	D059	W-3	R020	U-2
C011	S-1	D070	W-1	R021	U-1
C012	U-3	ICS		R022	U-1
C017	U-2	IC001	T-1	R023	U-1
C020	U-2	COILS		R024	U-1
C021	U-2	J901	T-1	R025	U-1
C025	U-1	L003	S-3	R026	U-2
C026	V-2	L010	U-2	R027	T-1
C051	V-2	L012	V-2	R028	T-2
C053	V-1	L052	V-2	R029	U-1
C056	V-1	TRANSISTORS		R052	V-2
C057	V-1	Q001	T-2	R054	V-2
C060	V-2	Q002	T-2	R058	V-1
C061	W-2	Q003	T-1	R060	V-1
C070	W-2	Q004	U-1	R061	V-1
DIODES		Q053	V-2	R067	W-3
D001	T-3	Q054	W-2	R068	W-2
D002	T-3	Q055	V-2	R069	W-2
D003	T-3	Q056	V-1	R070	V-3
D004	T-3	Q057	V-1	R071	V-2
D005	T-2	Q059	V-3	R073	W-3
D006	T-2	RESISTORS		R076	W-1
D007	T-1	R001	S-2	R077	W-2
D008	T-1	R002	T-3	R078	W-2
D009	T-1	R003	T-3	MISCELLANEOUS	
D010	S-1	R004	T-3	AC001	S-3
D011	U-3	R005	T-2	F001	S-3
D013	U-2	R006	T-2	SA001	S-3
D014	U-2	R007	T-2	T001	T-3
D015	U-2	R008	S-2		
D018	T-2	R009	T-1		

MAIN 5/5 Schematic Diagram Parts Location Guide

Ref No.	Position	Ref No.	Position
CAPACITORS		CAPACITORS	
C451	Y-1	C477	X-2
C452	Y-1	C478	X-2
C453	Y-1	ICS	
C454	Y-1	IC451	Y-2
C455	Y-1	RESISTORS	
C456	Y-1	R451	Y-1
C457	Y-1	R452	Y-1
C458	Z-1	R453	Z-2
C459	Z-1	R454	Z-2
C461	Z-2	R455	Z-2
C462	Z-2	R456	Z-3
C463	Z-2	R458	Y-3
C464	Z-3	R459	Y-3
C465	Z-3	R460	X-3
C466	Z-3	R461	X-2
C467	Y-3	R462	X-2
C468	Y-3	R463	X-2
C469	Y-3	R464	X-2
C470	Y-3	R465	X-2
C471	Y-3	R466	X-2
C472	Y-3	R467	X-2
C473	Y-3	R470	X-3
C474	X-3	R471	X-3
C475	X-3	R472	X-1
C476	X-2	R473	X-1

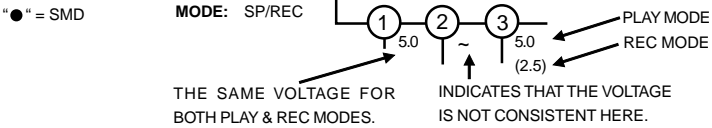
4



2

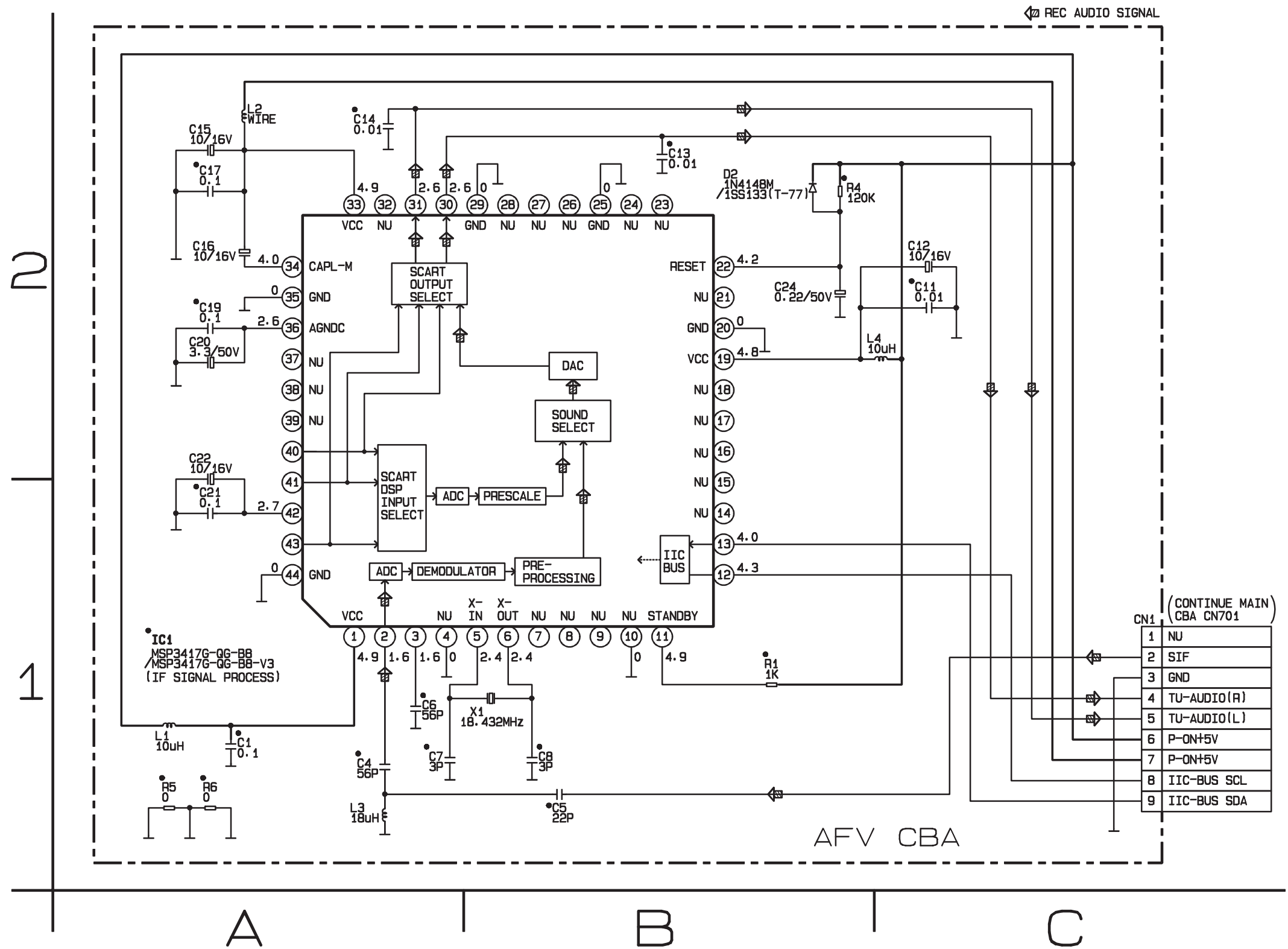
1

AFV Schematic Diagram (C, D)



Comparison Chart of Models and Marks

MODEL	MARK
VR340/55	A
VR340/75	B
VR740/55	C
VR740/75	D



AFV Schematic Diagram Parts Location Guide

Ref No.	Position
CAPACITORS	
C1	A-1
C4	A-1
C5	B-1
C6	A-1
C7	A-1
C8	B-1
C11	C-2
C12	C-2
C13	B-2
C14	A-2
C15	A-2
C16	A-2
C17	A-2
C19	A-2
C20	A-2
C21	A-1
C22	A-2
C24	B-2
CONNECTORS	
CN1	C-1
DIODES	
D2	B-2
ICS	
IC1	A-1
COILS	
L1	A-1
L2	A-2
L3	A-1
L4	B-2
RESISTORS	
R1	B-1
R4	B-2
R5	A-1
R6	A-1
CRYSTAL OSCILLATORS	
X1	B-1

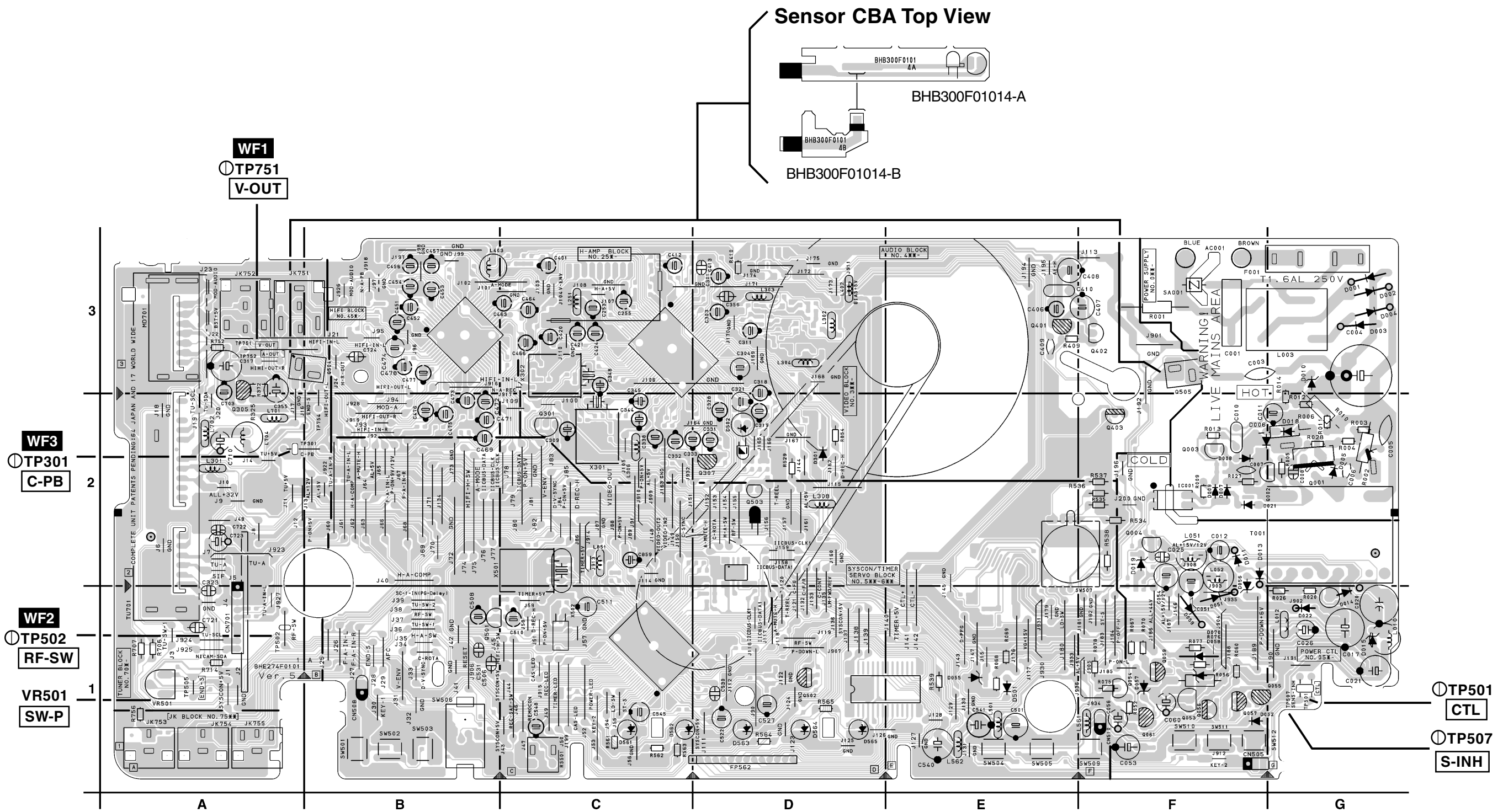
Main CBA Top View

CAUTION !
For continued protection against fire hazard,
replace only with the same type fuse.

NOTE :
The voltage for parts in hot circuit is measured
using hot GND as a common terminal.

CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F1001) is blown, check to see that all components in the power supply
circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.

**BECAUSE A HOT CHASSIS GROUND IS PRESENT IN THE POWER
SUPPLY CIRCUIT , AN ISOLATION TRANSFORMER MUST BE USED.
ALSO , IN ORDER TO HAVE THE ABILITY TO INCREASE THE INPUT
SLOWLY , WHEN TROUBLESHOOTING THIS TYPE POWER SUPPLY
CIRCUIT , A VARIABLE ISOLATION TRANSFORMER IS REQUIRED.**



Main CBA Bottom View

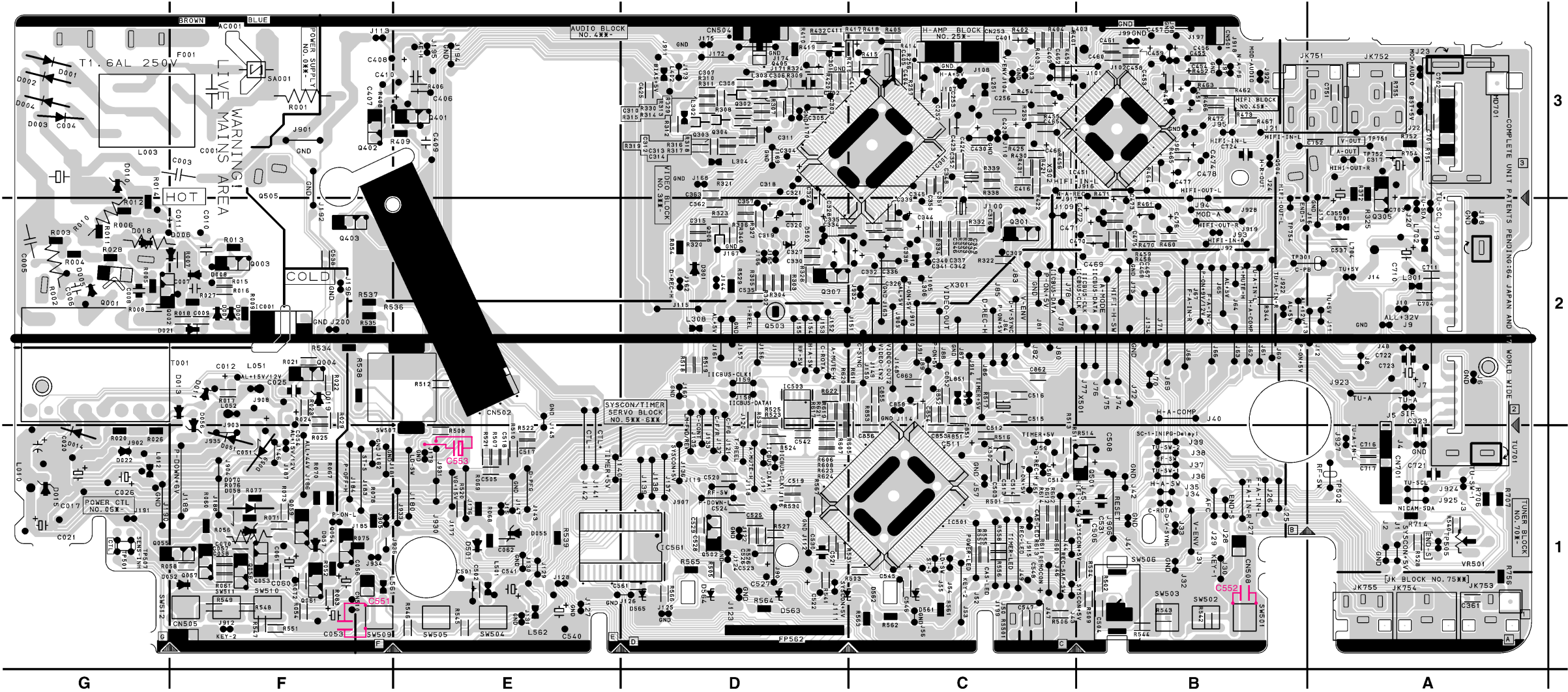
CAUTION !
For continued protection against fire hazard,
replace only with the same type fuse.

NOTE :
The voltage for parts in hot circuit is measured
using hot GND as a common terminal.

CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F1001) is blown, check to see that all components in the power supply
circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.

**BECAUSE A HOT CHASSIS GROUND IS PRESENT IN THE POWER
SUPPLY CIRCUIT , AN ISOLATION TRANSFORMER MUST BE USED.
ALSO , IN ORDER TO HAVE THE ABILITY TO INCREASE THE INPUT
SLOWLY , WHEN TROUBLESHOOTING THIS TYPE POWER SUPPLY
CIRCUIT , A VARIABLE ISOLATION TRANSFORMER IS REQUIRED.**

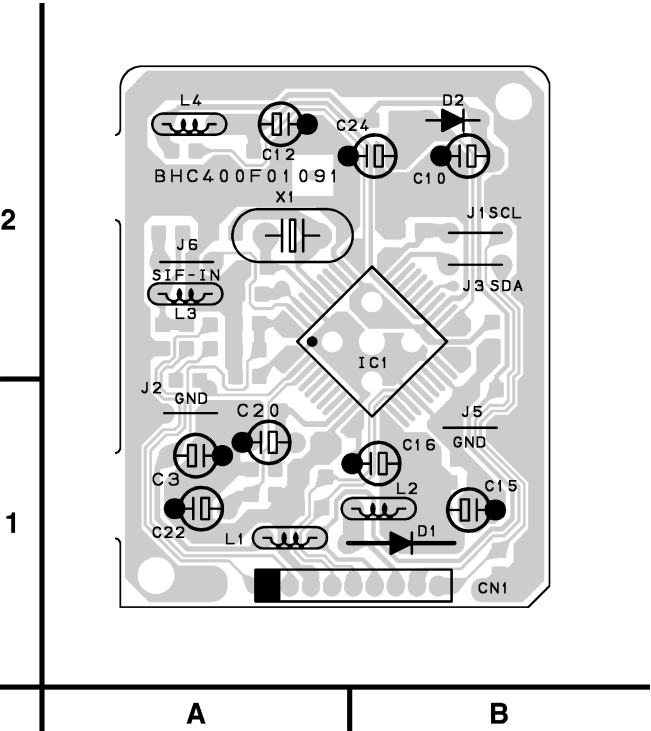
NOTE :
Red letters indicate additional parts on the copper side.



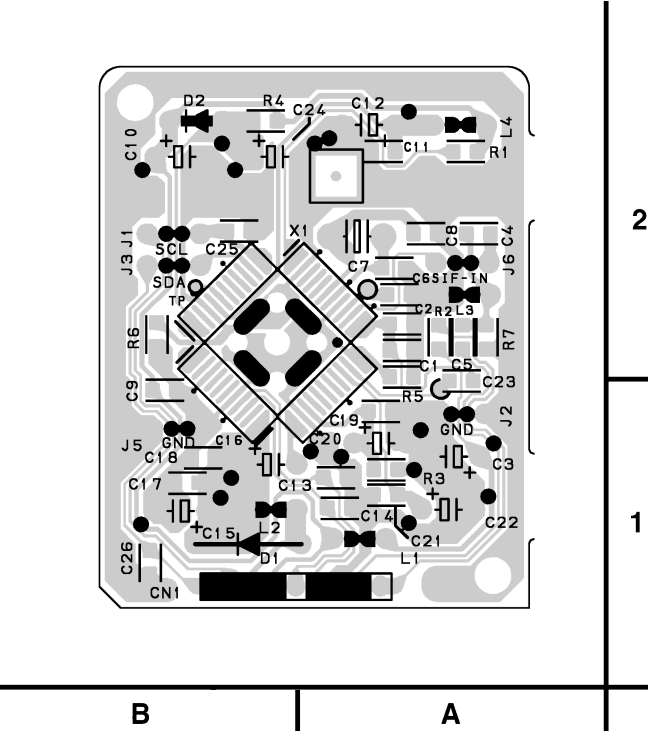
Main CBA Parts Location Guide

Ref No.	Position	Ref No.	Position	Ref No.	Position	Ref No.	Position	Ref No.	Position	Ref No.	Position	Ref No.	Position	Ref No.	Position	Ref No.	Position	Ref No.	Position
CAPACITORS		CAPACITORS		CAPACITORS		CAPACITORS		DIODES		TRANSISTORS		RESISTORS		RESISTORS		RESISTORS		RESISTORS	
C001	F-3	C330	D-2	C459	B-3	C547	C-1	D058	F-1	Q305	A-2	R071	F-1	R409	E-3	R521	E-1	R853	C-2
C003	F-3	C331	D-2	C461	B-3	C551	F-1	D059	F-1	Q307	D-2	R073	F-1	R410	D-3	R522	E-1	R854	D-2
C004	G-3	C332	C-2	C462	C-3	C552	B-1	D070	F-1	Q308	D-2	R076	F-1	R414	C-3	R523	D-2	SWITCHES	
C005	G-2	C333	C-2	C463	C-3	C553	E-1	D301	D-2	Q401	E-3	R077	F-1	R415	C-3	R524	D-1	SW501	B-1
C006	G-2	C334	D-2	C464	C-3	C561	E-1	D501	E-1	Q402	F-3	R078	F-1	R416	C-3	R525	D-2	SW502	B-1
C007	F-2	C335	D-2	C465	C-3	C701	A-3	D502	D-2	Q403	F-2	R253	C-3	R417	D-3	R526	E-1	SW503	B-1
C008	G-2	C336	C-2	C466	C-3	C703	A-2	ICS		Q405	D-3	R256	C-3	R418	C-3	R527	D-1	SW505	E-1
C010	F-2	C337	C-2	C467	B-2	C704	A-2	IC001	F-2	Q501	C-1	R257	C-3	R419	D-3	R528	A-1	SW506	B-1
C011	F-2	C338	C-2	C468	B-2	C710	A-2	IC301	C-3	Q502	D-1	R302	D-2	R420	D-3	R529	D-2	SW507	F-2
C012	F-2	C339	C-2	C469	B-2	C711	A-2	IC451	C-3	Q503	D-2	R303	D-2	R421	C-3	R530	D-1	SW509	F-1
C017	G-1	C340	C-2	C470	C-2	C716	A-1	IC501	C-1	Q504	B-3	R304	D-2	R422	C-3	R533	D-2	SW510	F-1
C020	G-1	C341	C-2	C471	C-2	C717	A-1	IC503	D-2	Q505	F-3	R305	D-2	R425	C-3	R534	F-2	SW511	F-1
C021	G-1	C342	C-2	C472	B-2	C721	A-1	IC561	E-1	RESISTORS		R306	D-2	R430	C-3	R535	F-2	SW512	G-1
C025	F-2	C344	C-2	C473	B-3	C722	A-2	COILS		J30	B-1	R307	D-3	R431	C-3	R536	F-2	SW513	B-1
C026	G-1	C345	C-3	C474	B-3	C723	A-2	J901	F-3	J912	F-1	R308	D-3	R432	D-3	R537	F-2	SW514	G-1
C051	F-1	C346	C-2	C475	B-2	C751	A-3	J931	E-1	R001	F-3	R309	D-3	R451	B-3	R538	F-2	VARIABLE RESISTORS	
C053	F-1	C348	C-3	C476	B-2	C752	A-3	L003	F-3	R002	G-2	R310	D-3	R452	B-3	R539	E-1	VR501	A-1
C056	F-1	C349	C-2	C477	B-3	C851	C-1	L010	G-1	R003	G-2	R311	D-3	R453	C-3	R540	A-1	CRYSTAL OSCILLATORS	
C057	F-1	C350	C-3	C478	B-3	C852	C-2	L012	G-1	R004	G-2	R312	D-3	R454	C-3	R541	D-1	X302	C-3
C060	F-1	C351	C-3	C501	E-1	C853	C-1	L052	F-2	R005	G-2	R313	D-3	R455	C-3	R542	B-1	X501	C-1
C061	F-1	C352	C-3	C503	C-1	C854	C-2	L251	C-3	R006	G-2	R314	D-3	R456	C-3	R543	B-1	X502	C-1
C070	F-1	C355	A-2	C506	B-1	C855	C-2	L301	A-2	R007	F-2	R315	D-3	R458	B-2	R544	B-1	MISCELLANEOUS	
C253	C-3	C361	A-1	C508	B-1	C856	C-1	L302	D-3	R008	G-2	R316	D-3	R459	B-2	R545	E-1	AC001	F-3
C255	C-3	C362	D-2	C510	C-1	C858	C-2	L303	D-3	R009	F-2	R317	D-3	R460	B-2	R546	E-1	F001	G-3
C256	C-3	C401	C-3	C511	C-1	C859	C-2	L304	D-3	R010	G-2	R318	D-3	R461	B-2	R547	F-1	FP562	D-1
C301	D-3	C403	C-3	C512	C-1	C862	C-2	L306	C-2	R011	G-2	R319	D-3	R462	B-3	R548	F-1	JK751	A-3
C302	D-3	C404	C-3	C513	C-1	CONNECTORS		L308	D-2	R012	G-2	R320	D-2	R463	B-3	R549	F-1	JK752	A-3
C303	D-3	C405	C-3	C514	C-1	CN701	A-1	L403	C-3	R013	F-2	R321	D-3	R464	B-3	R555	C-1	JK753	A-1
C304	D-3	C406	E-3	C515	C-2	DIODES		L501	E-1	R014	G-2	R322	C-2	R465	B-3	R556	C-1	JK754	A-1
C305	D-3	C407	F-3	C516	C-2	D001	G-3	L561	E-1	R015	F-2	R323	D-2	R466	B-3	R557	C-1	JK755	A-1
C306	D-3	C409	E-3	C517	E-1	D002	G-3	L562	E-1	R016	F-2	R324	D-3	R467	B-3	R566	D-1	RS501	C-1
C307	D-3	C410	F-3	C518	E-1	D003	G-3	L701	A-2	R020	G-1	R325	A-3	R470	B-2	R601	C-1	SA001	F-3
C308	D-3	C411	D-3	C519	D-1	D004	G-3	L702	A-2	R021	F-2	R327	D-2	R471	B-3	R605	C-1	T001	F-2
C309	C-2	C412	C-3	C520	D-1	D005	G-2	L704	A-2	R022	F-2	R328	D-2	R472	B-3	R611	C-1	TU701	A-1
C310	D-3	C413	D-3	C521	D-1	D006	G-2	L851	C-2	R023	F-2	R329	D-3	R473	B-3	R612	C-1	TEST POINTS	
C311	D-3	C414	C-3	C522	D-1	D007	F-2	TRANSISTORS		R024	F-2	R330	D-3	R501	C-1	R618	C-2	TP301	A-2
C312	D-3	C416	C-3	C523	D-1	D008	F-2	Q001	G-2	R025	F-1	R332	C-2	R502	B-1	R620	D-2	TP501	G-1
C313	D-3	C420	C-3	C524	D-1	D009	F-2	Q002	G-2	R026	G-1	R334	C-2	R503	D-1	R621	D-2	TP502	A-1
C314	D-3	C421	D-3	C525	D-1	D010	G-3	Q003	F-2	R027	F-2	R335	C-2	R504	B-1	R623	D-1	TP505	A-1
C315	D-2	C423	C-3	C526	D-1	D011	F-2	Q004	F-2	R028	G-2	R336	C-2	R505	D-1	R624	D-1	TP507	G-1
C317	A-3	C424	C-3	C527	D-1	D013	F-2	Q053	F-1	R029	F-2	R340	D-2	R506	B-1	R706	A-1	TP751	A-3
C318	D-3	C430	C-3	C528	D-1	D014	G-2	Q054	F-1	R052	F-1	R344	B-2	R509	B-1	R707	A-1	TP752	A-3
C319	D-2	C451	B-3	C529	D-1	D015	G-1	Q055	G-1	R054	F-1	R372	A-3	R511	C-1	R714	A-1	TP754	B-2
C320	D-2	C452	B-2	C530	D-1	D018	G-2	Q056	F-1	R058	G-1	R401	C-3	R513	C-2	R751	A-3		
C321	D-3	C453	B-3	C535	D-2	D019	F-2	Q057	F-1	R060	F-1	R402	C-3	R514	B-1	R752	A-3		
C323	A-1	C454	B-3	C537	A-2	D021	G-2	Q059	F-1	R061	F-1	R403	C-3	R516	C-1	R754	A-3		
C324	D-3	C455	B-3	C540	E-1	D022	G-1	Q301	C-2	R067	F-1	R404	C-3	R517	C-2	R755	A-3		
C326	C-2	C456	B-3	C541	E-1	D052	G-1	Q302	D-3	R068	E-1	R405	C-3	R518	D-2	R756	A-1		
C327	D-2	C457	B-3	C542	D-1	D055	E-1	Q303	D-3	R069	E-1	R406	E-3	R519	D-2	R851	C-1		
C328	D-2	C458	B-3	C545	C-1	D056	F-2	Q304	D-3	R070	F-1	R408	F-3	R520	E-1	R852	C-2		

AFV CBA Top View

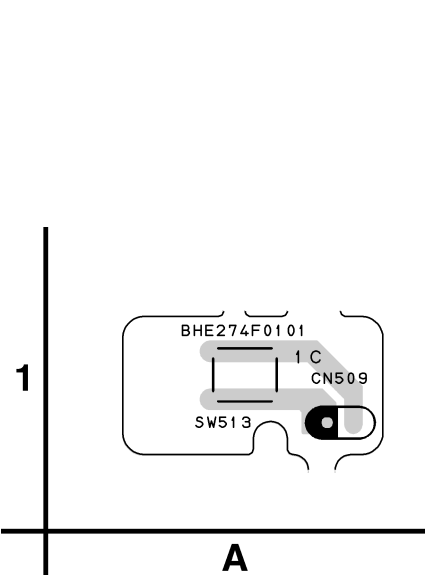


AFV CBA Bottom View

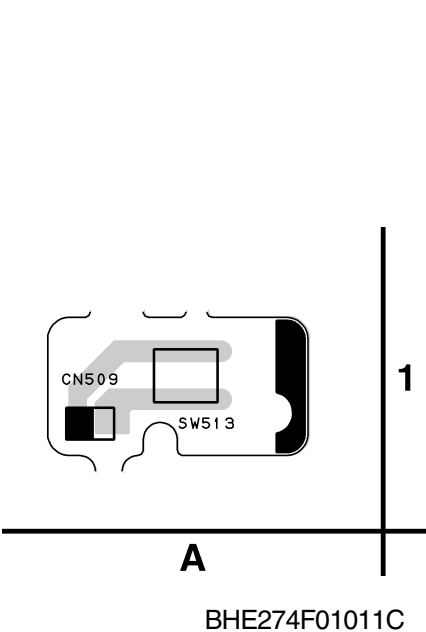


BHC400F01091

SW1 CBA Top View



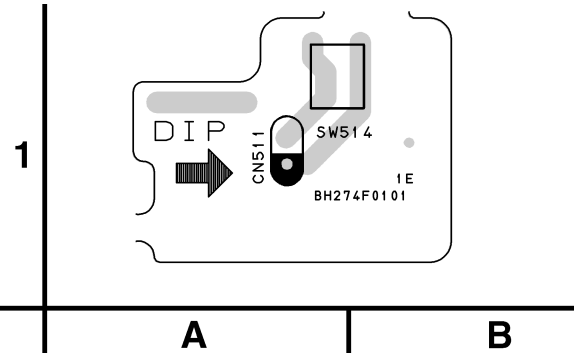
SW1 CBA Bottom View



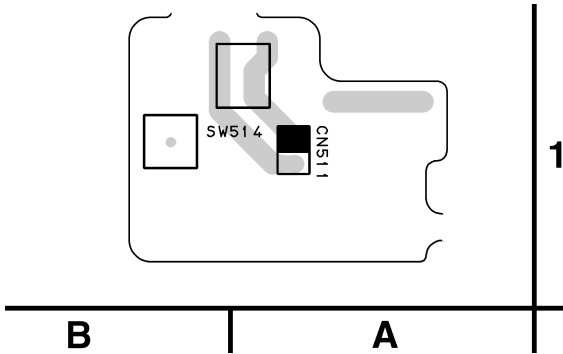
AFV CBA Parts Location Guide

Ref No.	Position	Ref No.	Position
CAPACITORS		CONNECTORS	
C1	A-2	CN1	B-1
C4	A-2	DIODES	
C5	A-2	D2	B-2
C6	A-2	ICS	
C7	A-2	IC1	B-2
C8	A-2	COILS	
C11	A-2	L1	A-1
C12	A-2	L2	B-1
C13	B-1	L3	A-2
C14	A-1	L4	A-2
C15	B-1	RESISTORS	
C16	B-1	R1	A-2
C17	B-1	R4	B-2
C19	A-1	R5	A-1
C20	A-1	R6	B-2
C21	A-1	CRYSTAL OSCILLATORS	
C22	A-1	X1	B-2
C24	B-2		

SW2 CBA Top View



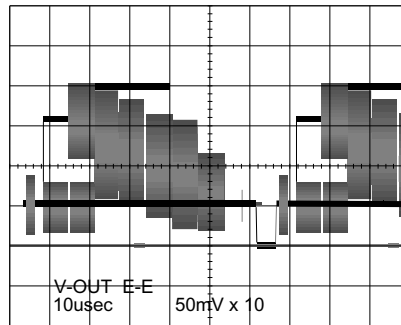
SW2 CBA Bottom View



BHE274F01011E

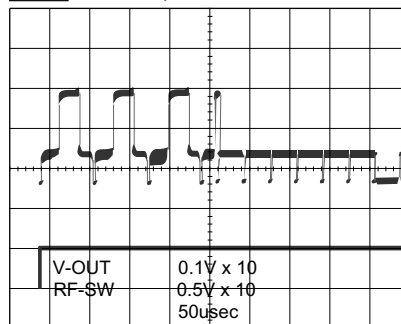
WAVEFORMS

WF1 (TP751 of Main CBA)



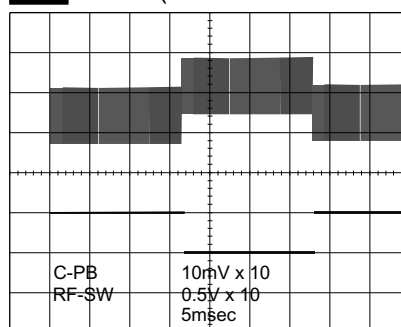
WF1 UPPER (TP751 of Main CBA)

WF2 LOWER (TP502 of Main CBA)



WF3 UPPER (TP301 of Main CBA)

WF2 LOWER (TP502 of Main CBA)

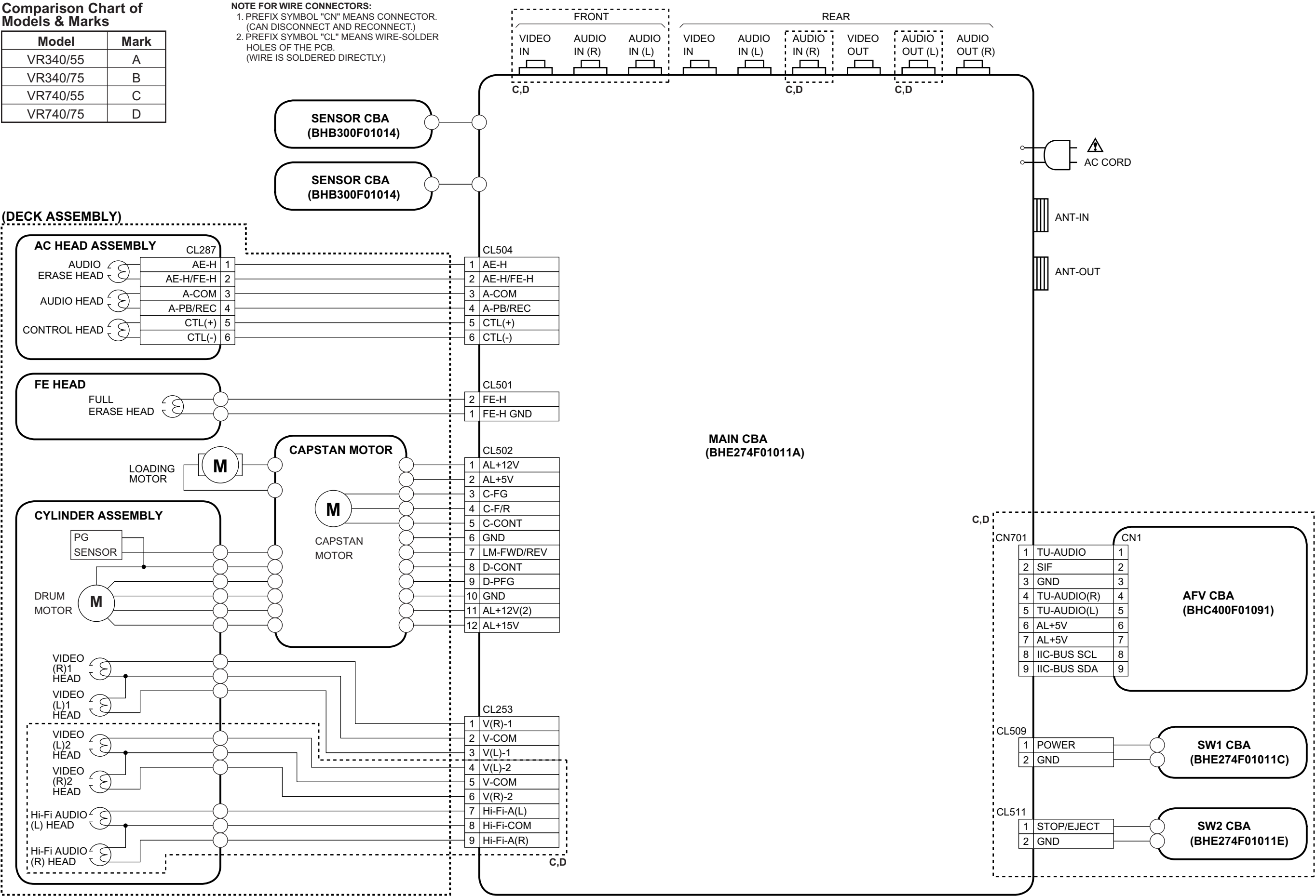


WIRING DIAGRAM

Comparison Chart of Models & Marks

Model	Mark
VR340/55	A
VR340/75	B
VR740/55	C
VR740/75	D

NOTE FOR WIRE CONNECTORS:
1. PREFIX SYMBOL "CN" MEANS CONNECTOR.
(CAN DISCONNECT AND RECONNECT.)
2. PREFIX SYMBOL "CL" MEANS WIRE-SOLDER
HOLES OF THE PCB.
(WIRE IS SOLDERED DIRECTLY.)



SYSTEM CONTROL TIMING CHARTS

Mode SW : LD-SW

LD-SW Position detection A/D Input voltage Limit (Calculated voltage)	Symbol
3.76V~4.50V (4.12V)	EJ
4.51V~5.00V (5.00V)	CL
0.00V~0.25V (0.00V)	SB
1.06V~1.50V (1.21V)	TL
0.66V~1.05V (0.91V)	FB
1.99V~2.60V (2.17V)	SF
1.51V~1.98V (1.80V)	SM
3.20V~3.75V (3.40V)	AU
0.26V~0.65V (0.44V)	AL
4.51V~5.00V (5.00V)	SS
2.61V~3.19V (2.97V)	RS

↑ Note:

Note :

EJ → RS: Loading FWD (LM-FWD "H", LM-REV "L")

RS → EJ: Loading REV (LM-FWD "L", LM-REV "H")

Stop (A) = Loading

Stop (B) = Unloading

Note:

Symbol	Loading Status
EJ	Eject
CL	Eject ~ REW Reel
SB	REW Reel ~ Stop(B)
TL	Stop(B) ~ Brake Cancel
FB	Brake Cancel ~ FF / REW
SF	FF / REW ~ Stop(M), (FF / REW)
SM	Stop(M), (FF / REW) ~ Stop(A)
AU	Stop(A) ~ Play / REC
AL	Play / REC ~ Still / Slow
SS	Still / Slow ~ RS (REW Search)
RS	RS (REW Search)

1. EJECT (POWER OFF) -> CASSETTE IN (POWER ON) -> STOP(B) -> STOP(A) -> PLAY -> RS -> FS -> PLAY -> STILL -> PLAY -> STOP(A)

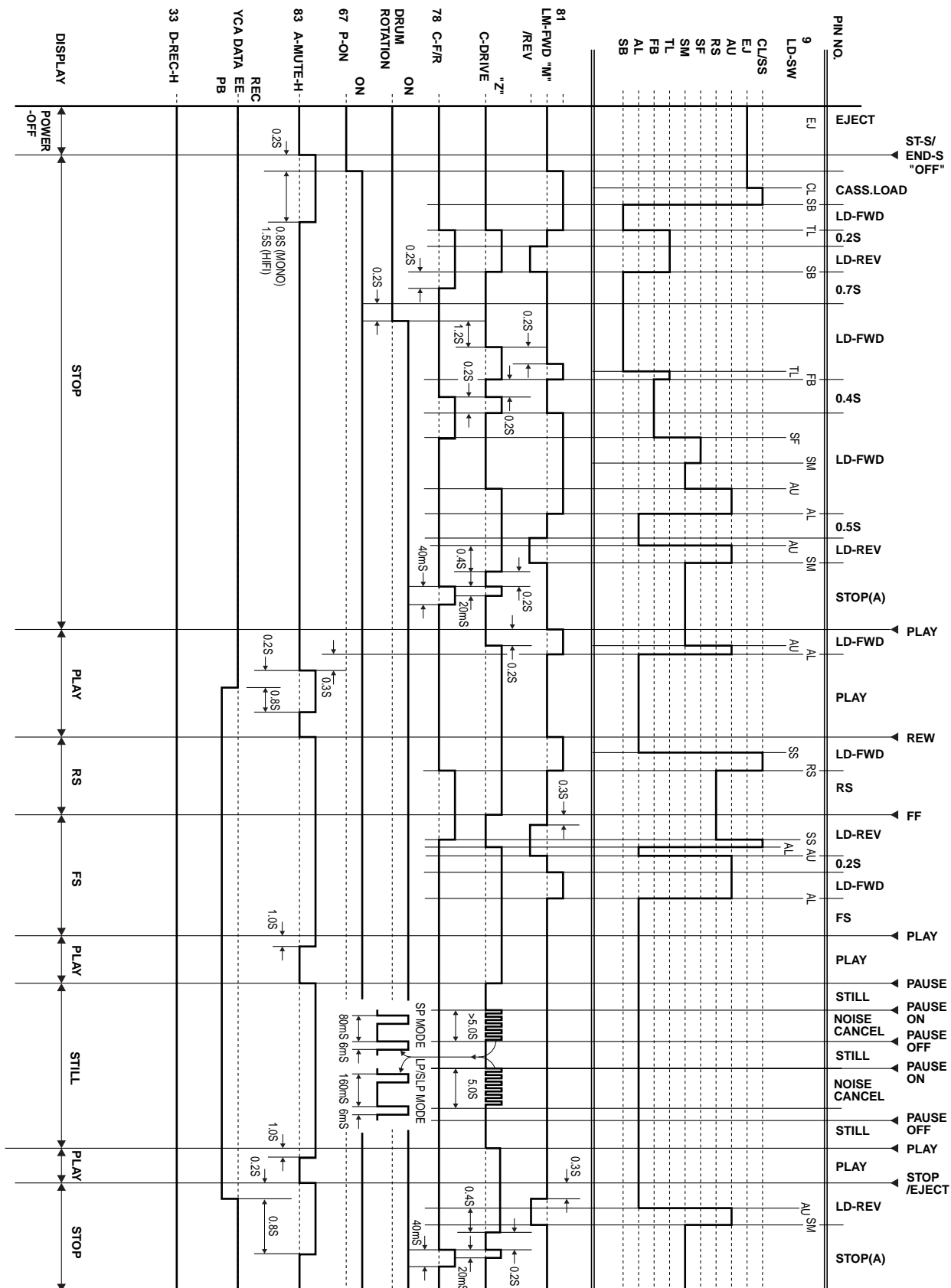


Fig. 1

2. STOP(A) -> FF -> STOP(A) -> REW -> STOP(A) -> REC -> PAUSE -> PAUSE or REC -> STOP(A) -> EJECT

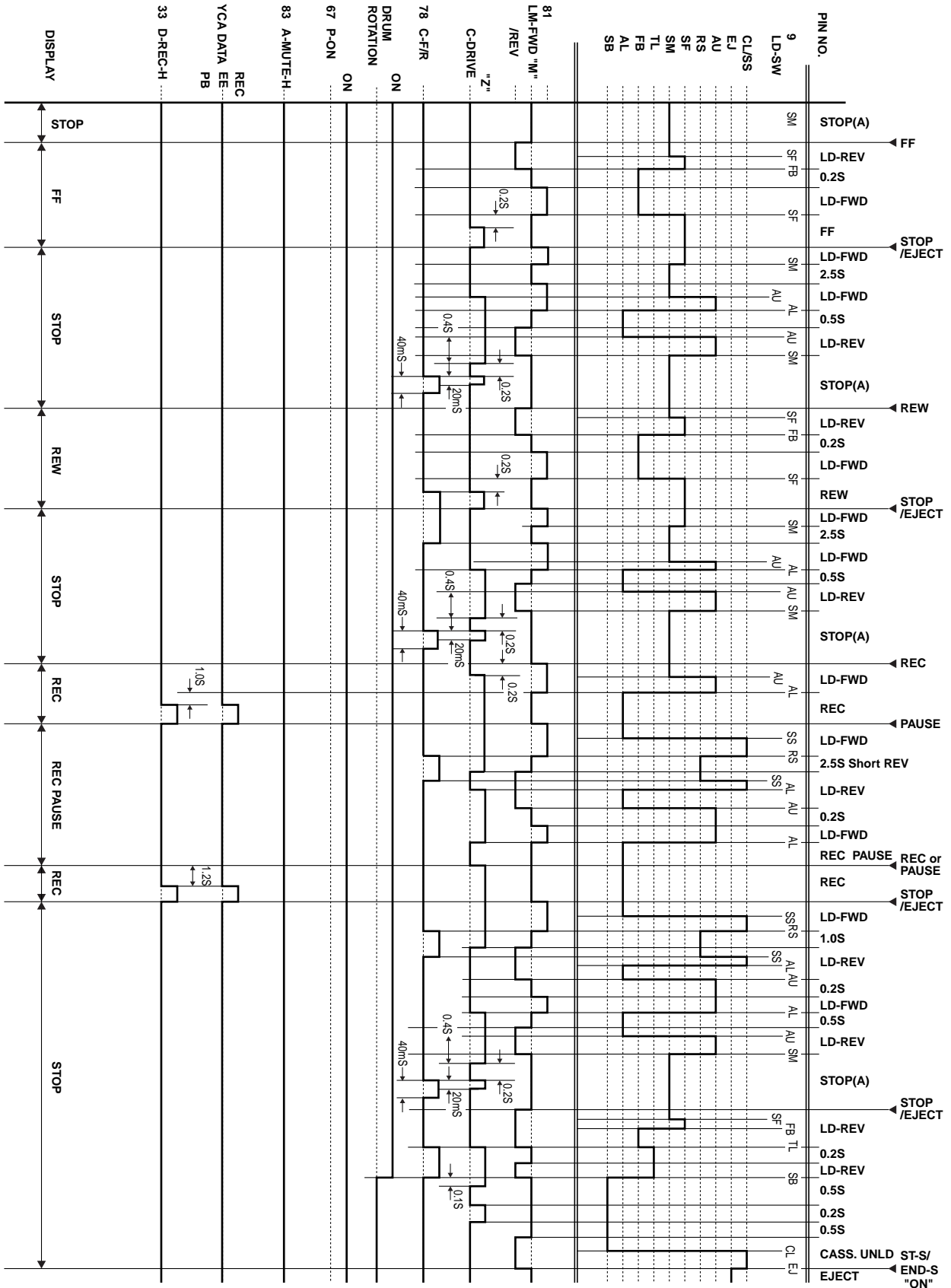


Fig. 2

[VR740/ (55, 75)]

Still/Slow Control Frame Advance Timing Chart

1) SP Mode

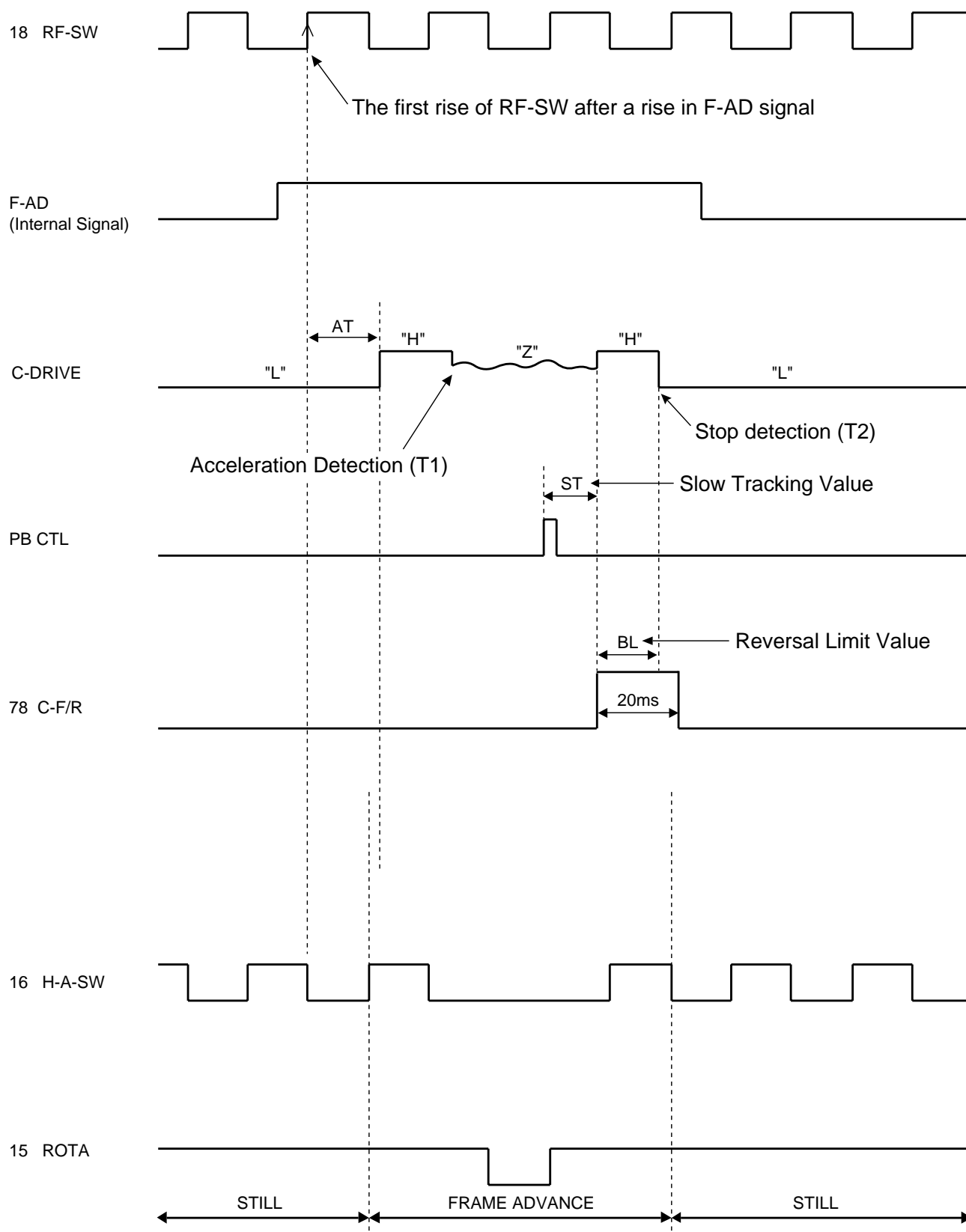


Fig. 3

2) LP/SLP Mode

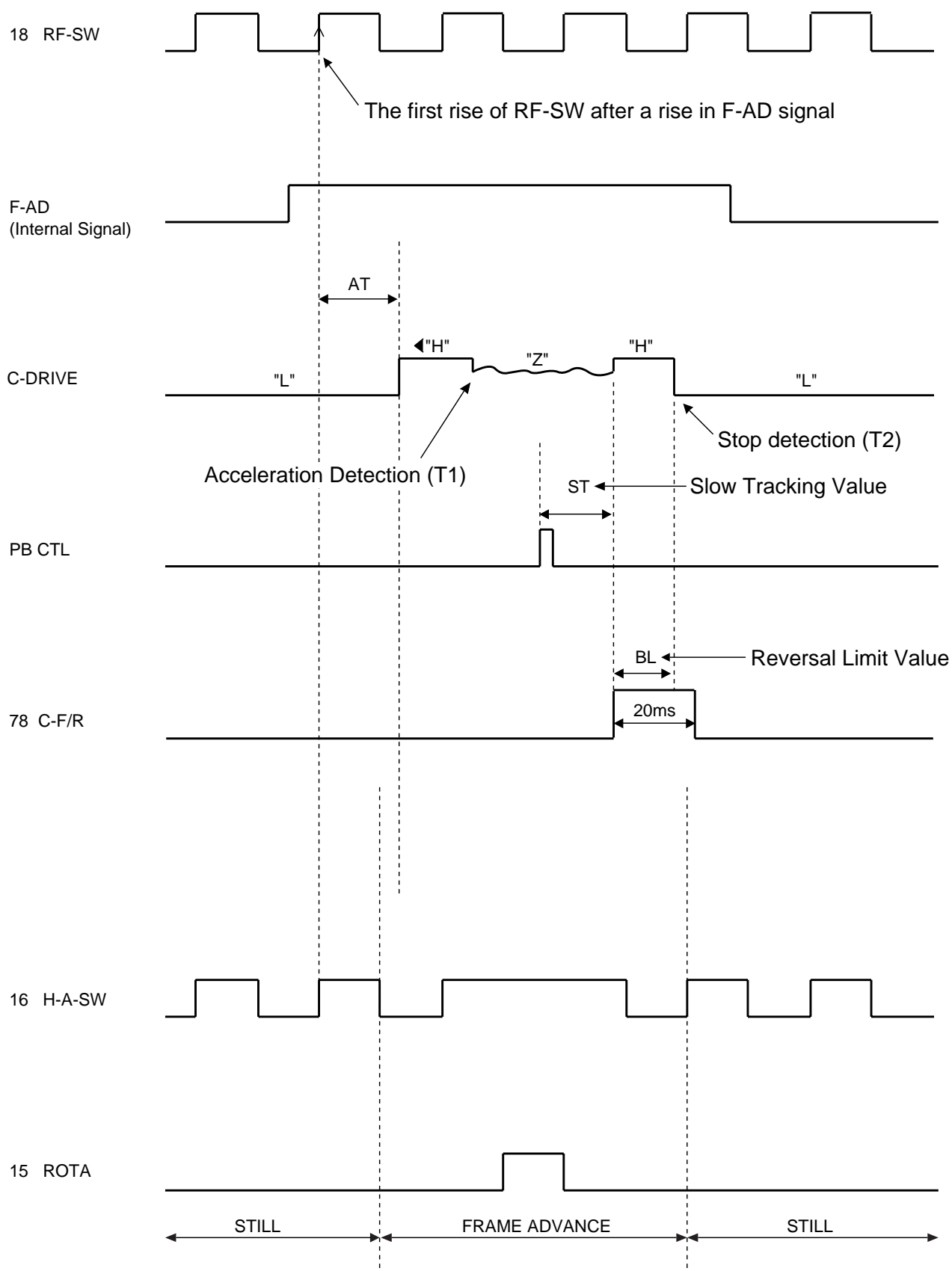


Fig. 4

ST-S/
END-S
"OFF"



2. STOP(A) -> FF -> STOP(A) -> REW -> STOP(A) -> REC -> PAUSE -> PAUSE or REC -> STOP(A) -> EJECT

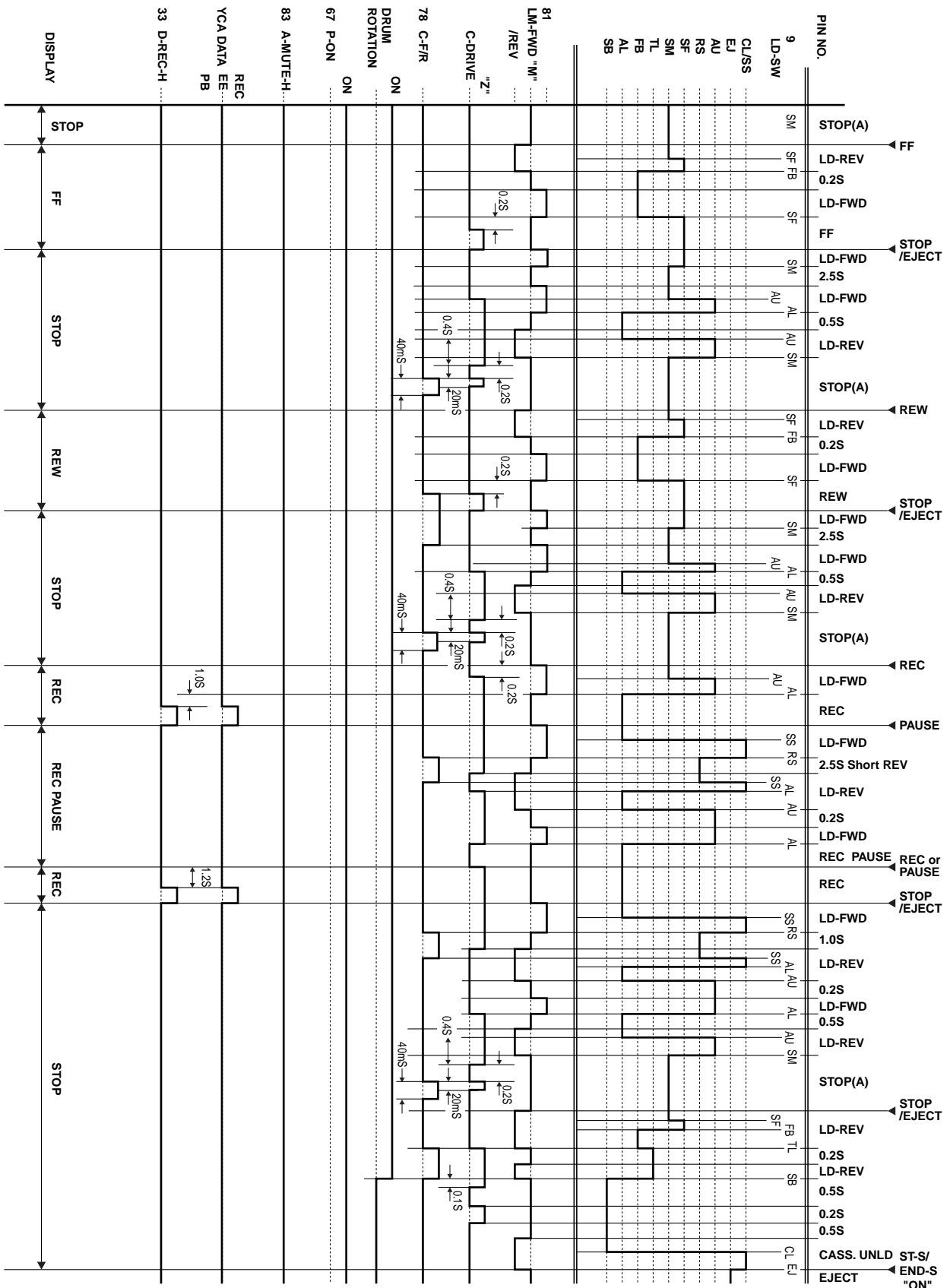


Fig. 6

IC PIN FUNCTION DESCRIPTIONS

Comparison Chart of Models and Marks

Model	Mark
VR340/55	A
VR340/75	B
VR740/55	C
VR740/75	D

IC501(SERVO / SYSTEM CONTROL IC)

“H” ≥ 4.5V, “L” ≤ 1.0V

Pin No.	Mark	IN/ OUT	Signal Name	Function	Active Level
1		-	N.U.	Not Used	-
2		IN	PG-DELAY	Video Head Switching Pulse Signal Adjusted Voltage	A/D
3		IN	POW-SAF	P-ON Power Detection Input Signal	A/D
4		IN	END-S	Tape End Position Detect Signal	A/D
5		IN	AFC	Automatic Frequency Control Signal	A/D
6		IN	V-ENV	Video Envelope Comparator Signal	A/D
7		IN	KEY-1	Key Scan Input Signal 1	A/D
8		IN	KEY-2	Key Scan Input Signal 2	A/D
9		IN	LD-SW	Deck Mode Position Detector Signal	A/D
10		OUT	ST-S	Tape Start Position Detector Signal	A/D
11		-	N.U.	Not Used	-
12		-	N.U.	Not Used	-
13		OUT	D-V-SYNC	Dummy V-sync Output	H/Hi-z
14		IN	REMOC ON-IN	Remote Control Sensor	L
15		OUT	C-ROTA	Color Phase Rotary Changeover Signal	H/L

Pin No.	Mark	IN/ OUT	Signal Name	Function	Active Level
16	A,B	-	N.U.	Not Used	-
	C,D	OUT	H-A-SW	Video Head Amp Switching Pulse	H/L
17	A,B	-	N.U.	Not Used	-
	C,D	IN	H-A-COMP	Head Amp Comparator Signal	H/L
18		OUT	RF-SW	Video Head Switching Pulse	H/L
19	A,B	-	N.U.	Not Used	-
	C,D	OUT	HiFi-H-SW	HiFi Audio Head Switching Pulse	H/L
20		-	N.U.	Not Used	-
21	A,B	OUT	TUN-SW1	Tuner System Control Signal Output	H/L
	C,D	-	N.U.	Not Used	-
22	A,B	OUT	TUN-SW2	Tuner System Control Signal Output	H/L
	C,D	-	N.U.	Not Used	-
23		-	N.U.	Not Used	-
24		-	N.U.	Not Used	-
25		-	N.U.	Not Used	-
26		-	N.U.	Not Used	-
27		-	N.U.	Not Used	-
28		-	N.U.	Not Used	-
29		-	N.U.	Not Used	-
30		-	N.U.	Not Used	-
31		IN	REC-SAF-SW	Recording Safety SW Detect (With Record tab="L"/ With out Record tab="H")	H
32	A,B	-	N.U.	Not Used	-
	C,D	IN	A-MODE	Hi-Fi Tape Detection Signal	L
33		OUT	D-REC-H	Delayed Record Signal	L
34		IN	RESET	System Reset Signal (Reset="L")	L
35		IN	XC-IN	Sub Clock	-
36		OUT	XC-OUT	Sub Clock	-

Pin No.	Mark	IN/OUT	Signal Name	Function	Active Level
37		-	Vcc	Vcc	-
38		IN	X-IN	Main Clock Input	-
39		OUT	X-OUT	Main Clock Input	-
40		-	Vss	Vss(GND)	-
41		-	N.U.	Not Used	-
42		-	N.U.	Not Used	-
43		IN	CLKSEL	Clock Select (GND)	L
44		IN	OSCIN	Clock Input for letter size	-
45		OUT	OSCOU T	Clock Output for letter size	-
46		-	NUB	Not Used	-
47		-	LP	LP	-
48		IN	FSC-IN [4.43MHz]	4.43MHz Clock Input	-
49		-	OSDVss	OSDVss	-
50		IN	OSD-V-IN	OSD Video Signal Input	L
51		-	N.U.	Not Used	-
52		OUT	OSD-V-OUT	OSD Video Signal Output	L
53		-	OSDVcc	OSDVcc	-
54		-	HLF	LPF Connected Terminal (Slicer)	-
55	B,D	-	N.U.	Not Used	-
	A,C	IN	COLOR-IN	SECAM or MESECAM Chroma Video Input Signal at Super Impose	Z/L
56		-	N.U.	Not Used	-
57		-	N.U.	Not Used	-
58		IN	C-SYNC	Composite Synchronized Pulse	PULSE
59		-	N.U.	Not Used	-
60		-	N.U.	Not Used	-
61		-	N.U.	Not Used	-
62		-	N.U.	Not Used	-
63		-	N.U.	Not Used	-
64		-	N.U.	Not Used	-
65		-	N.U.	Not Used	-

Pin No.	Mark	IN/OUT	Signal Name	Function	Active Level
66		-	N.U.	Not Used	-
67		IN	P-ON-L	Power On Signal at Low	L
68		OUT	DRV-DATA	LED Clock Driver IC Control Data	H/L
69		OUT	DRV-STB	LED Clock Driver IC Chip Select Signal	H/L
70		OUT	DRV-CLK	LED Clock Driver IC Control Clock	H/L
71		OUT	I ² C BUS-SCL	I ² C BUS Control Clock	H/L
72		IN/OUT	I ² C BUS-SDA	I ² C BUS Control Data	H/L
73		OUT	P-OFF-H	Power Off at High	L
74		-	N.U.	Not Used	-
75		-	N.U.	Not Used	-
76		OUT	C-CONT	Capstan Motor Control Signal	PWM
77		OUT	D-CONT	Drum Motor Control Signal	PWM
78		OUT	C-F/R	Capstan Motor FWD/REV Control Signal (FWD="L"/REV="H")	H/L
79		-	N.U.	Not Used	-
80		IN	T-REEL	Take Up Reel Rotation Signal	PULSE
81		OUT	LM-FWD/REV	Loading Motor Control Signal	H/L/Hi-z
82		-	N.U.	Not Used	-
83		OUT	A-MUTE-H	Audio Mute Control Signal (Mute = "H")	H
84	A,B	-	N.U.	Not Used	-
	C,D	OUT	FF/REW-L	CTL Frequency Characteristics Switching Signal (FF/REW="L")	L
85		-	N.U.	Not Used	-
86		IN	P-DOWN-L	Power Voltage Down Detector Signal	L

Pin No.	Mark	IN/ OUT	Signal Name	Function	Active Level
87		IN	C-FG	Capstan Motor Rotation Detection Pulse	PULSE
88		-	AMPV _s	AMPV _{ss}	-
89		-	N.U.	Not Used	-
90		IN	D-PFG	Drum Motor Phase/ Frequency Generator	PULSE
91		-	AMPVR EF OUT	V-Ref for CTL AMP	-
92		-	AMPVR EF _{IN}	V-Ref for CTL AMP	-
93		-	P80/C	P80/C Terminal	-
94		OUT	CTL (-)	Playback/ Record Control Signal (-)	H/L
95		OUT	CTL (+)	Playback/ Record Control Signal (+)	H/L
96		-	AMPC	CTL AMP Connected Terminal	-
97		-	CTLAM P _{out}	To Monitor for CTL AMP Output	PULSE
98		-	AMPV _c	AMPV _{cc}	-
99		-	AV _{cc}	A/D Converter Power Input/ Standard Voltage Input	-
100		-	N.U.	Not Used	-

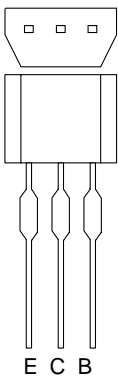
Notes:

Abbreviation for Active Level:

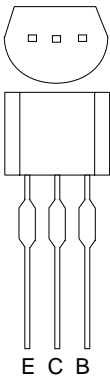
PWM -----Pulse Wide Modulation

A/D-----Analog - Digital Converter

LEAD IDENTIFICATIONS

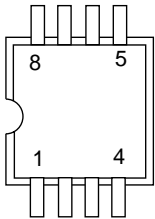


BN1F4M-T
 BA1F4M-T
 KTA1266(GR)
 KTC3199(Y,GR,BL)
 2SC2785(J.H.F.K)
 KRA103M
 KRC103M

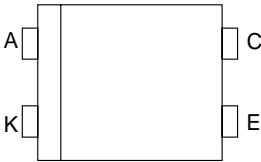


2SC1815-BL(TPE2)
 2SC1815-Y(TPE2)
 2SC1815-GR(TPE2)
 2SC2120-Y(TPE2)
 KTC3203(Y)
 2SC1815-BL(TPE2)
 2SA1015-GR(TPE2)

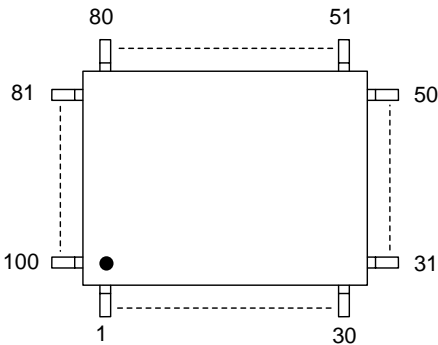
CAT24WC02JI
 BR24C02F-W



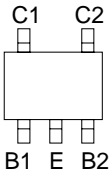
LTV-817(B.C)-F
 EL817(A,B,C)



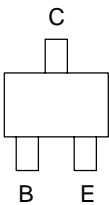
LA71586M
 QSZAA0RMB145



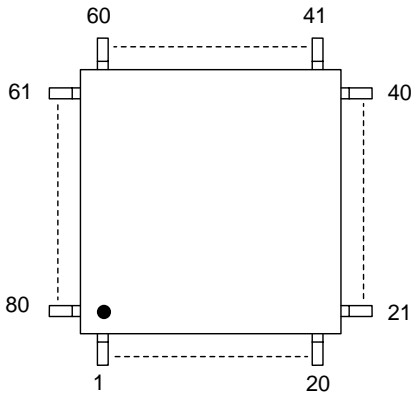
RN1511(TE85R)
 FMG4A T148



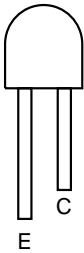
KTC3879Y-RTK
 KTC3875Y-RTK



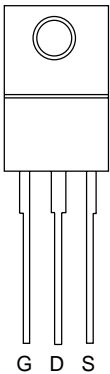
LA72638M



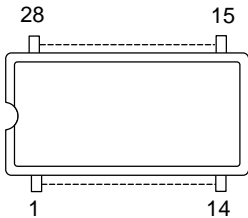
PT204-6B-12
 MID-32A22



2SK3566



PT-6958-FN-TP



Note:
 A: Anode
 K: Cathode
 E: Emitter
 C: Collector
 B: Base
 R: Reference
 S: Source
 G: Gate
 D: Drain

PRODUCT SAFETY NOTE: Products marked with a ▲

have special characteristics important to safety.
 Before replacing any of these components, read carefully
 the product safety notice in this service manual.
 Don't degrade the safety of the product through improper servicing.

NOTES:

Parts that not assigned part numbers (-----) are not
 available.

Tolerance of Capacitors and Resistors are noted with
 the following symbols.

C.....±0.25%	D.....±0.5%	F.....±1%
G.....±2%	J.....±5%	K.....±10%
M.....±20%	N.....±30%	Z.....+80/-20%

ELECTRICAL PARTS LIST				VR340/55	VR340/75	VR740/55	VR740/75
Pos.	▲	12 NC	Description				
MCV CBA				1	1	1	1
Consists of the following							
			MAIN CBA(MCV-A)	1	1	1	1
			SW1 CBA(MCV-C)			1	1
			SW2 CBA(MCV-E)			1	1
			SENSOR CBA	1	1	1	1
MAIN CBA(MCV-A)							
2B8		9965 000 08566	BUSH, LED(F) H3700UD	1	1	1	1
2B11		9965 000 05241	HEATSINK V2600PZ	1		1	
2B34		9965 000 17325	SHIELD, HEAD HE494PD	1	1	1	1
2L041		4822 502 14667	SCREW, S-TIGHT M3X8 BIND + CHROME	1		1	
A5		9965 000 13676	JACK BOARD HC2G0PD	1	1		
A5		9965 000 13696	JACK BOARD HC4G0PD			1	1
AC001	▲	9965 000 08666	AC CORD PE8B2CB1H0A-057	1		1	
AC001	▲	9965 000 09204	AC CORD PS8B1S4IH0A-067		1		1
CAPACITORS							
C001	▲	9965 000 06521	METALLIZED FILM CAP. 0.068UF/250V K	1	1	1	1
C003	▲	9965 000 06522	SAFETY CAP. 2200PF/250V	1	1	1	1
C004			ELECTROLYTIC CAP. 22UF/400V M		1		1
C005			CERAMIC CAP. B K 0.01UF/500V	1	1	1	1
C006			CERAMIC CAP. SL K 120PF/1KV	1		1	
C007			CERAMIC CAP.(AX) B K 1000PF/50V		1		1
C008			CERAMIC CAP.(AX) X K 5600PF/16V	1	1	1	1
C010			FILM CAP.(P) 0.022UF/50V J	1	1	1	1
C011			ELECTROLYTIC CAP. 10UF/16V M H7		1		1
C012			ELECTROLYTIC CAP. 10UF/50V M H7	1	1	1	1
C017			ELECTROLYTIC CAP. 470UF/16V M	1	1	1	1
C020			ELECTROLYTIC CAP. 1000UF/16V M	1	1	1	1
C021			ELECTROLYTIC CAP. 470UF/10V M	1	1	1	1
C025			CERAMIC CAP.(AX) X K 5600PF/16V	1	1	1	1
C026			ELECTROLYTIC CAP. 47UF/16V M	1	1	1	1
C051			ELECTROLYTIC CAP. 47UF/16V M H7	1	1	1	1
C053			ELECTROLYTIC CAP. 220UF/6.3V M	1	1	1	1
C056			CERAMIC CAP.(AX) F Z 0.047UF/16V	1	1	1	1
C057			CHIP CERAMIC CAP. CH J 470PF/50V	1	1	1	1
C060			ELECTROLYTIC CAP. 10UF/16V M			1	1
C061			CHIP CERAMIC CAP. F Z 0.1UF/50V			1	1
C070			CHIP CERAMIC CAP. B K 0.01UF/50V	1	1	1	1
C253			ELECTROLYTIC CAP. 10UF/16V M H7	1	1	1	1
C255			ELECTROLYTIC CAP. 1UF/50V M H7	1	1	1	1
C256			CHIP CERAMIC CAP. F Z 0.1UF/50V	1	1	1	1
C301			ELECTROLYTIC CAP. 1UF/50V M H7	1	1	1	1
C302			CHIP CERAMIC CAP. B K 0.047UF/50V	1	1	1	1

ELECTRICAL PARTS LIST				VR340/55	VR340/75	VR740/55	VR740/75
Pos.	▲	12 NC	Description				
C303			ELECTROLYTIC CAP. 1UF/50V M H7	1	1	1	1
C304			ELECTROLYTIC CAP. 100UF/6.3V H7	1	1	1	1
C305			CHIP CERAMIC CAP. F Z 0.1UF/50V	1	1	1	1
C306			CHIP CERAMIC CAP. B K 0.01UF/50V	1	1	1	1
C307			CHIP CERAMIC CAP. CH J 27PF/50V	1	1	1	1
C308			CHIP CERAMIC CAP. CH J 22PF/50V	1	1	1	1
C309			ELECTROLYTIC CAP. 10UF/16V M H7	1	1	1	1
C310			CHIP CERAMIC CAP. CH J 390PF/50V	1	1	1	1
C311			ELECTROLYTIC CAP. 3.3UF/25V M H7	1	1	1	1
C312			CHIP CERAMIC CAP. CH J 47PF/50V	1	1	1	1
C313			CHIP CERAMIC CAP. CH D 10PF/50V	1	1	1	1
C314			CHIP CERAMIC CAP. CH J 180PF/50V	1	1	1	1
C315			CHIP CERAMIC CAP. B K 0.01UF/50V	1	1	1	1
C317			ELECTROLYTIC CAP. 470UF/6.3V M	1	1	1	1
C318			ELECTROLYTIC CAP. 2.2UF/50V M H7	1	1	1	1
C319			ELECTROLYTIC CAP. 22UF/10V M H7	1	1	1	1
C320			CHIP CERAMIC CAP. B K 0.01UF/50V	1	1	1	1
C321			ELECTROLYTIC CAP. 0.47UF/50V M H7	1	1	1	1
C323			CERAMIC CAP.(AX) F Z 0.1UF/50V	1	1	1	1
C324			CHIP CERAMIC CAP. F Z 0.1UF/50V	1	1	1	1
C326			CHIP CERAMIC CAP. F Z 0.1UF/50V	1	1	1	1
C327			CHIP CERAMIC CAP. B K 0.01UF/50V	1	1	1	1
C328			ELECTROLYTIC CAP. 47UF/6.3V M H7	1	1	1	1
C330			CHIP CERAMIC CAP. B K 0.01UF/50V	1	1	1	1
C331			ELECTROLYTIC CAP. 1UF/50V M H7	1	1	1	1
C332			ELECTROLYTIC CAP. 10UF/16V M H7	1	1	1	1
C333			ELECTROLYTIC CAP. 1UF/50V M H7	1	1	1	1
C334			CHIP CERAMIC CAP. B K 0.01UF/50V	1	1	1	1
C335			CHIP CERAMIC CAP. B K 0.01UF/50V	1	1	1	1
C336			CHIP CERAMIC CAP. CH J 470PF/50V	1	1	1	1
C337			CHIP CERAMIC CAP. B K 0.01UF/50V	1	1	1	1
C338			ELECTROLYTIC CAP. 47UF/6.3V M H7	1	1	1	1
C339			CHIP CERAMIC CAP. B K 0.01UF/50V	1	1	1	1
C340			CHIP CERAMIC CAP. B K 0.01UF/50V	1	1	1	1
C341			CHIP CERAMIC CAP. B K 0.01UF/50V	1	1	1	1
C342			CHIP CERAMIC CAP. F Z 0.1UF/50V	1	1	1	1
C344			ELECTROLYTIC CAP. 1UF/50V M H7	1	1	1	1
C345			ELECTROLYTIC CAP. 1UF/50V M H7	1	1	1	1
C346			CHIP CERAMIC CAP. B K 0.022UF/50V	1	1	1	1
C348			ELECTROLYTIC CAP. 1UF/50V M H7	1	1	1	1
C349			CHIP CERAMIC CAP. B K 0.022UF/50V	1	1	1	1
C350			CHIP CERAMIC CAP. B K 0.01UF/50V	1		1	
C351			CHIP CERAMIC CAP. B K 0.047UF/50V	1	1	1	1
C352			CHIP CERAMIC CAP. B K 0.022UF/50V	1	1	1	1
C355			ELECTROLYTIC CAP. 100UF/16V M	1	1	1	1
C361			CHIP CERAMIC CAP. F Z 0.1UF/50V			1	1
C362			CHIP CERAMIC CAP. B K 1000PF/50V	1	1	1	1
C401			ELECTROLYTIC CAP. 4.7UF/25V M H7	1	1	1	1
C403			CHIP CERAMIC CAP. F Z 0.1UF/50V	1	1	1	1
C404			CHIP CERAMIC CAP. F Z 0.1UF/50V	1	1	1	1
C405			CHIP CERAMIC CAP. B K 1000PF/50V	1	1	1	1
C406			ELECTROLYTIC CAP. 47UF/6.3V M H7	1	1	1	1
C407			ELECTROLYTIC CAP. 220UF/6.3V M H7	1	1	1	1
C409			CERAMIC CAP. B K 470PF/100V	1	1	1	1
C410			FILM CAP.(P) 0.018UF/100V J	1	1	1	1
C411			CHIP CERAMIC CAP. B K 0.01UF/50V	1	1	1	1
C412			ELECTROLYTIC CAP. 10UF/16V M H7	1	1	1	1
C413			CERAMIC CAP.(AX) X K 1200PF/16V	1	1	1	1
C414			CHIP CERAMIC CAP. CH J 820PF/50V	1	1	1	1
C416			CHIP CERAMIC CAP. F Z 0.1UF/50V	1	1	1	1
C420			ELECTROLYTIC CAP. 22UF/10V M H7	1	1	1	1
C421			ELECTROLYTIC CAP. 33UF/6.3V M H7	1	1	1	1
C423			CHIP CERAMIC CAP. B K 0.01UF/50V	1	1	1	1
C424			ELECTROLYTIC CAP. 47UF/6.3V M H7	1	1	1	1

ELECTRICAL PARTS LIST				VR340/55	VR340/75	VR740/55	VR740/75
Pos.	▲	12 NC	Description				
C430			CHIP CERAMIC CAP. F Z 0.1UF/50V	1	1		
C451			ELECTROLYTIC CAP. 10UF/16V M H7			1	1
C452			ELECTROLYTIC CAP. 1UF/50V M H7			1	1
C453			ELECTROLYTIC CAP. 22UF/10V M H7			1	1
C454			ELECTROLYTIC CAP. 4.7UF/25V M H7			1	1
C455			CHIP CERAMIC CAP. B K 0.01UF/50V			1	1
C456			ELECTROLYTIC CAP. 22UF/10V M H7			1	1
C457			ELECTROLYTIC CAP. 22UF/10V M H7			1	1
C458			CHIP CERAMIC CAP. B K 4700PF/50V			1	1
C459			CHIP CERAMIC CAP. B K 3300PF/50V			1	1
C461			CHIP CERAMIC CAP. CH J 100PF/50V			1	1
C462			CHIP CERAMIC CAP. B K 0.01UF/50V			1	1
C463			ELECTROLYTIC CAP. 1UF/50V M H7			1	1
C464			ELECTROLYTIC CAP. 4.7UF/25V M H7			1	1
C465			CHIP CERAMIC CAP. B K 0.01UF/50V			1	1
C466			ELECTROLYTIC CAP. 47UF/6.3V M H7			1	1
C467			CHIP CERAMIC CAP. B K 3300PF/50V			1	1
C468			CHIP CERAMIC CAP. B K 4700PF/50V			1	1
C469			ELECTROLYTIC CAP. 22UF/10V M H7			1	1
C470			CHIP CERAMIC CAP. B K 0.01UF/50V			1	1
C471			ELECTROLYTIC CAP. 4.7UF/25V M H7			1	1
C472			ELECTROLYTIC CAP. 22UF/10V M H7			1	1
C473			ELECTROLYTIC CAP. 1UF/50V M H7			1	1
C474			ELECTROLYTIC CAP. 47UF/16V M H7			1	1
C475			ELECTROLYTIC CAP. 10UF/16V M H7			1	1
C476			ELECTROLYTIC CAP. 10UF/16V M H7			1	1
C477			ELECTROLYTIC CAP. 10UF/16V M H7			1	1
C478			ELECTROLYTIC CAP. 10UF/16V M H7			1	1
C501			ELECTROLYTIC CAP. 220UF/6.3V M H7	1	1	1	1
C506			CERAMIC CAP.(AX) B K 100PF/50V			1	1
C508			ELECTROLYTIC CAP. 1UF/50V M H7	1	1	1	1
C510			ELECTROLYTIC CAP. 22UF/10V M H7	1	1	1	1
C511			ELECTROLYTIC CAP. 100UF/6.3V H7	1	1	1	1
C512			CHIP CERAMIC CAP. F Z 0.1UF/50V	1	1	1	1
C513			CHIP CERAMIC CAP. CH J 22PF/50V	1	1	1	1
C514			CHIP CERAMIC CAP. CH J 20PF/50V	1	1	1	1
C515			CHIP CERAMIC CAP. CH J 18PF/50V	1	1	1	1
C516			CHIP CERAMIC CAP. CH J 18PF/50V	1	1	1	1
C517			CHIP CERAMIC CAP. B K 4700PF/50V	1	1	1	1
C518			CHIP CERAMIC CAP. B K 0.047UF/50V	1	1	1	1
C519			CHIP CERAMIC CAP. B K 0.01UF/50V	1	1	1	1
C520			CHIP CERAMIC CAP. CH J 100PF/50V	1	1	1	1
C521			CHIP CERAMIC CAP. CH J 560PF/50V	1	1	1	1
C522			ELECTROLYTIC CAP. 22UF/6.3V M H7	1	1	1	1
C523			CHIP CERAMIC CAP. B K 1000PF/50V	1	1	1	1
C524			CHIP CERAMIC CAP. CH J 330PF/50V	1	1	1	1
C525			CHIP CERAMIC CAP. B K 1000PF/50V	1	1	1	1
C526			CHIP CERAMIC CAP. B K 4700PF/50V	1	1	1	1
C527			ELECTROLYTIC CAP. 22UF/6.3V M H7	1	1	1	1
C528			CHIP CERAMIC CAP. B K 0.022UF/50V	1	1		
C529			CHIP CERAMIC CAP. B K 0.01UF/50V			1	1
C530			CERAMIC CAP.(AX) F Z 0.022UF/25V	1	1	1	1
C535			CHIP CERAMIC CAP. B K 0.01UF/50V	1	1	1	1
C540			ELECTROLYTIC CAP. 470UF/6.3V M	1	1	1	1
C541			ELECTROLYTIC CAP. 330UF/6.3V M	1	1	1	1
C542			CHIP CERAMIC CAP. F Z 0.1UF/50V	1	1	1	1
C545			ELECTROLYTIC CAP. 22UF/6.3V M H7	1	1	1	1
C547			CHIP CERAMIC CAP. F Z 0.1UF/50V	1	1	1	1
C561			CHIP CERAMIC CAP. B K 0.022UF/50V	1	1	1	1
C701			CHIP CERAMIC CAP. F Z 0.1UF/50V	1	1	1	1
C703			ELECTROLYTIC CAP. 10UF/16V M H7	1	1	1	1
C704			CHIP CERAMIC CAP. B K 1000PF/50V	1	1	1	1
C710			ELECTROLYTIC CAP. 100UF/6.3V M	1	1	1	1
C711			CHIP CERAMIC CAP. B K 1000PF/50V	1	1	1	1

ELECTRICAL PARTS LIST				VR340/55	VR340/75	VR740/55	VR740/75
Pos.	▲	12 NC	Description				
C716			CHIP CERAMIC CAP. F Z 0.22UF/16V			1	1
C717			CHIP CERAMIC CAP. F Z 0.22UF/16V			1	1
C721			CERAMIC CAP.(AX) Y M 0.01UF/16V	1	1	1	1
C722			CERAMIC CAP.(AX) B K 1000PF/50V	1	1		
C723			ELECTROLYTIC CAP. 1UF/50V M	1	1		
C751			CHIP CERAMIC CAP. B K 2200PF/50V			1	1
C751			CHIP CERAMIC CAP. B K 4700PF/50V	1	1		
C752			CHIP CERAMIC CAP. B K 2200PF/50V			1	1
C851			CHIP CERAMIC CAP. CH J 22PF/50V	1	1	1	1
C852			CHIP CERAMIC CAP. CH J 22PF/50V	1	1	1	1
C853			CHIP CERAMIC CAP. B K 4700PF/50V	1	1	1	1
C854			CHIP CERAMIC CAP. B K 0.01UF/50V	1	1	1	1
C855			CHIP CERAMIC CAP. F Z 0.1UF/50V	1	1	1	1
C856			CHIP CERAMIC CAP. CH J 180PF/50V	1	1	1	1
C858			CHIP CERAMIC CAP. CH J 560PF/50V	1		1	
C859			ELECTROLYTIC CAP. 47UF/6.3V M H7	1	1	1	1
C862			CHIP CERAMIC CAP. B K 0.01UF/50V	1	1	1	1
CN701		9965 000 12175	AFV PCB ASSEMBLY CP2500/C461			1	1
DIODES							
D001		4822 130 31933	RECTIFIER DIODE 1N4005	1	1	1	1
D002		4822 130 31933	RECTIFIER DIODE 1N4005	1	1	1	1
D003		4822 130 31933	RECTIFIER DIODE 1N4005	1	1	1	1
D004		4822 130 31933	RECTIFIER DIODE 1N4005	1	1	1	1
D005		4822 130 81244	RECTIFIER DIODE ERA22-10	1	1	1	1
D006		4822 130 30621	SWITCHING DIODE 1N4148M	1	1	1	1
D007		4822 130 30621	SWITCHING DIODE 1N4148M	1	1	1	1
D008		4822 130 30621	SWITCHING DIODE 1N4148M	1	1	1	1
D009		4822 130 30621	SWITCHING DIODE 1N4148M	1	1	1	1
D010		9965 000 09183	ZENER DIODE DZ-33BSDT265	1		1	
D011		4822 130 41487	RECTIFIER DIODE BA157	1	1	1	1
D013		4822 130 41487	RECTIFIER DIODE BA157	1	1	1	1
D014		4822 130 32715	SCHOTTKY BARRIER DIODE SB340			1	1
D014		5322 130 81917	SCHOTTKY BARRIER DIODE SB140	1	1		
D015		9965 000 15310	ZENER DIODE DZ-8.2BSAT265	1	1	1	1
D018		4822 130 30621	SWITCHING DIODE 1N4148M	1	1	1	1
D019		9965 000 12904	ZENER DIODE DZ-5.1BSBT265	1	1	1	1
D021		4822 130 30621	SWITCHING DIODE 1N4148M		1		1
D022		4822 130 31933	RECTIFIER DIODE 1N4005	1	1	1	1
D052		4822 130 31933	RECTIFIER DIODE 1N4005	1	1	1	1
D055		9965 000 09183	ZENER DIODE DZ-33BSDT265	1	1	1	1
D056		9965 000 08649	ZENER DIODE DZ-5.6BSCT265	1	1	1	1
D058		9965 000 09283	ZENER DIODE DZ-10BSBT265			1	1
D070		4822 130 31933	RECTIFIER DIODE 1N4005	1	1	1	1
D301		4822 130 30621	SWITCHING DIODE 1N4148M	1	1	1	1
D501		4822 130 30621	SWITCHING DIODE 1N4148M	1	1	1	1
D502		9965 000 05250	LED SIR-563ST3F P	1	1	1	1
F001	▲	4822 070 31602	FUSE T1.6AL/250V	1	1	1	1
FH001		4822 256 10461	FUSE HOLDER MSF-015	1	1	1	1
FH002		4822 256 10461	FUSE HOLDER MSF-015	1	1	1	1
FP562		9965 000 09307	LED DISPLAY LFU-4421-2001A	1	1	1	1
IC's							
IC001	▲	4822 130 11655	PHOTOCOUPLER LTV-817B-F	1	1	1	
IC001	▲	4822 130 11655	PHOTOCOUPLER LTV-817B-F				1
IC301		9965 000 08650	IC:Y/C/A LA71586M	1	1	1	1
IC451		4822 209 17559	IC:HIFI LA72638M			1	1
IC501		9965 000 17326	MICROCONTROLLER 16BIT M37762MCA-AB1GP	1	1	1	1
IC503		9965 000 16620	IC:EEPROM CAT24WC02JI	1	1	1	1
IC561		9965 000 12183	IC:LED DRIVER PT6958-FN-TP	1	1	1	1
COILS							
J901		4822 526 10685	BEAD CORE B16 RH 3.5X10X1.3	1	1	1	1
JK751		4822 265 11266	RCA JACK MSP-282V-14	1	1		
JK751		4822 265 11657	RCA JACK MSP-283V-B-324			1	1
JK752		4822 265 11266	RCA JACK MSP-282V-14	1	1		
JK752		4822 265 11656	RCA JACK MSP-293V3-324			1	1

ELECTRICAL PARTS LIST				VR340/55	VR340/75	VR740/55	VR740/75
Pos.	▲	12 NC	Description				
JK753		4822 265 11659	RCA JACK(YELLOW) MSP-281V4-B			1	1
JK754		4822 265 11661	RCA JACK(WHITE) MSP-281V1-B			1	1
JK755		9965 000 00423	RCA JACK(RED) MSP-281V3-A			1	1
L003	▲	9965 000 09297	LINE FILTER 33MH SA-01021	1	1	1	1
L010		9965 000 05627	CHOKE COIL 47UH-K	1	1	1	1
L012		9965 000 13681	INDUCTOR 100UH-J-5FT	1	1	1	1
L052		9965 000 05627	CHOKE COIL 47UH-K	1	1	1	1
L251		9965 000 08652	INDUCTOR 5.6UH-K-26T	1	1	1	1
L301		4822 157 11511	INDUCTOR 15UH-K-26T	1	1	1	1
L302		4822 157 11509	INDUCTOR 47UH-K-26T	1	1	1	1
L303		4822 157 10325	INDUCTOR 39UH-K-26T	1	1	1	1
L304		4822 157 10649	INDUCTOR 100UH-K-26T	1	1	1	1
L306		9965 000 05705	INDUCTOR 47UH-K-5FT	1	1	1	1
L308		4822 157 10347	INDUCTOR 22UH-K-26T	1	1	1	1
L403		9965 000 05627	CHOKE COIL 47UH-K	1	1	1	1
L501		4822 157 10649	INDUCTOR 100UH-K-26T	1	1	1	1
L561		4822 157 63316	INDUCTOR 56UH-K-26T	1	1	1	1
L562		9965 000 05704	INDUCTOR 68UH-K-26T	1	1	1	1
L701		4822 157 10889	INDUCTOR 10UH-K-26T	1	1	1	1
L704		9965 000 05627	CHOKE COIL 47UH-K	1	1	1	1
L851		9965 000 08629	INDUCTOR 1.8UH-K-26T	1	1	1	1
TRANSISTORS							
Q001		9965 000 17186	FET 2SK3566		1		1
Q001		9965 000 17186	FET 2SK3566	1		1	
Q002		4822 130 10923	TRANSISTOR KTC3199(BL)	1	1	1	1
Q003		4822 130 10923	TRANSISTOR KTC3199(BL)	1	1	1	1
Q004		4822 130 10103	TRANSISTOR KTC3199(Y)	1	1	1	1
Q053		4822 130 10103	TRANSISTOR KTC3199(Y)			1	1
Q054		4822 130 42292	TRANSISTOR KTC3203(Y)			1	1
Q055		4822 130 42959	TRANSISTOR KTA1266(GR)	1	1	1	1
Q056		4822 130 10145	RES. BUILT-IN TRANSISTOR KRA103M	1	1	1	1
Q057		4822 130 10098	RES. BUILT-IN TRANSISTOR KRC103M	1	1	1	1
Q059		4822 130 10098	RES. BUILT-IN TRANSISTOR KRC103M			1	1
Q301		4822 130 10103	TRANSISTOR KTC3199(Y)	1	1	1	1
Q302		9965 000 13682	CHIP TRANSISTOR KTC3879Y-RTK	1	1	1	1
Q303		9965 000 13682	CHIP TRANSISTOR KTC3879Y-RTK	1	1	1	1
Q304		9965 000 13683	CHIP TRANSISTOR KTC3875Y-RTK	1	1	1	1
Q305		4822 130 42959	TRANSISTOR KTA1266(GR)	1	1	1	1
Q307		4822 130 42959	TRANSISTOR KTA1266(GR)	1	1	1	1
Q308		9965 000 13683	CHIP TRANSISTOR KTC3875Y-RTK	1	1	1	1
Q401		4822 130 42959	TRANSISTOR KTA1266(GR)	1	1	1	1
Q402		4822 130 42292	TRANSISTOR KTC3203(Y)	1	1	1	1
Q403		4822 130 10145	RES. BUILT-IN TRANSISTOR KRA103M	1	1	1	1
Q405		9965 000 16623	CHIP TRANSISTOR FMG4A T148	1	1	1	1
Q501		4822 130 10923	TRANSISTOR KTC3199(BL)	1	1	1	1
Q502		4822 130 10098	RES. BUILT-IN TRANSISTOR KRC103M			1	1
Q503		9965 000 08630	PHOTO TRANSISTOR PT204-6B-12	1	1	1	1
RESISTORS							
R001		9965 000 08653	CARBON RES. 1/2W K 5.6M OHM	1	1	1	1
R002		9965 000 08635	METAL OXIDE FILM RES. 1W J 150K OHM	1	1	1	1
R003			CARBON RES. 1/4W J 1M OHM	1	1	1	1
R004			CARBON RES. 1/4W J 1M OHM	1	1	1	1
R005			CARBON RES. 1/6W J 820 OHM	1		1	
R005			CARBON RES. 1/6W G 680 OHM		1		1
R006			METAL OXIDE FILM RES. 1W J 1.8 OHM	1		1	
R006			METAL OXIDE FILM RES. 1W J 2.2 OHM		1		1
R007			CHIP RES.(1608) 1/10W J 22K OHM		1		1
R007			CHIP RES.(1608) 1/10W J 3.9K OHM	1		1	
R008			CHIP RES.(1608) 1/10W J 100K OHM		1		1
R008			CHIP RES.(1608) 1/10W J 220K OHM	1		1	
R009			CARBON RES. 1/4W J 1.8K OHM	1		1	
R009			CARBON RES. 1/6W G 3.3K OHM		1		1
R010			METAL OXIDE FILM RES. 2W J 150K OHM	1		1	
R011			CARBON RES. 1/4W J 390K OHM		1		1

ELECTRICAL PARTS LIST				VR340/55	VR340/75	VR740/55	VR740/75
Pos.	▲	12 NC	Description				
R012			CARBON RES. 1/4W J 390K OHM		1		1
R013			CARBON RES. 1/6W J 470K OHM	1	1	1	1
R014			CARBON RES. 1/6W J 47K OHM	1		1	
R014			CARBON RES. 1/6W J 100K OHM		1		1
R015			CHIP RES.(1608) 1/10W J 10K OHM	1	1	1	1
R016			CHIP RES.(1608) 1/10W J 100K OHM	1	1	1	1
R020			CARBON RES. 1/4W J 470 OHM	1	1	1	1
R021			CHIP RES.(1608) 1/10W J 22K OHM	1	1	1	1
R022			CHIP RES.(1608) 1/10W J 1.5K OHM		1		1
R022			CHIP RES.(1608) 1/10W J 390 OHM	1		1	
R023			CHIP RES.(1608) 1/10W J 2.2K OHM	1	1	1	1
R024			CHIP RES.(1608) 1/10W J 1K OHM	1	1	1	1
R025			CHIP RES.(1608) 1/10W J 330 OHM	1	1	1	1
R026			CARBON RES. 1/4W J 470 OHM	1	1	1	1
R027			CARBON RES. 1/4W J 1K OHM	1	1	1	1
R028			CARBON RES. 1/4W J 1M OHM	1	1	1	1
R029			CHIP RES.(1608) 1/10W J 68K OHM	1	1	1	1
R052			CARBON RES. 1/4W J 470 OHM			1	1
R054			CHIP RES.(1608) 1/10W J 180 OHM	1	1	1	1
R058			CHIP RES.(1608) 1/10W J 820 OHM	1	1	1	1
R060			CARBON RES. 1/6W J 2.7K OHM	1	1	1	1
R061			CHIP RES.(1608) 1/10W J 22K OHM	1	1	1	1
R067			CARBON RES. 1/4W J 1.8K OHM	1	1	1	1
R068			CARBON RES. 1/6W J 10K OHM	1	1	1	1
R069			CARBON RES. 1/6W J 8.2K OHM	1	1	1	1
R070			CARBON RES. 1/6W J 10K OHM			1	1
R071			CHIP RES.(1608) 1/10W J 1K OHM			1	1
R073			CHIP RES.(1608) 1/10W J 4.7K OHM	1	1	1	1
R076			CARBON RES. 1/6W J 1 OHM	1	1	1	1
R077			CARBON RES. 1/6W J 1 OHM	1	1	1	1
R078			CARBON RES. 1/6W J 2.2 OHM			1	1
R253			CHIP RES.(1608) 1/10W J 12K OHM	1	1	1	1
R256			CHIP RES.(1608) 1/10W J 47K OHM			1	1
R257			CHIP RES.(1608) 1/10W J 2.7K OHM	1	1	1	1
R302			CHIP RES.(1608) 1/10W J 12K OHM			1	1
R303			CHIP RES.(1608) 1/10W J 10K OHM	1	1	1	1
R304			CHIP RES.(1608) 1/10W J 18K OHM	1	1	1	1
R305			CHIP RES.(1608) 1/10W J 22K OHM	1	1	1	1
R306			CHIP RES.(1608) 1/10W J 100K OHM			1	1
R306			CHIP RES.(1608) 1/10W J 10K OHM	1	1		
R307			CHIP RES.(1608) 1/10W J 820 OHM	1	1	1	1
R308			CHIP RES.(1608) 1/10W J 1K OHM	1	1	1	1
R309			CHIP RES.(1608) 1/10W J 820 OHM	1	1	1	1
R310			CHIP RES.(1608) 1/10W J 1K OHM	1	1	1	1
R311			CHIP RES.(1608) 1/10W J 390 OHM	1	1	1	1
R312			CHIP RES.(1608) 1/10W J 390 OHM	1	1	1	1
R313			CHIP RES.(1608) 1/10W J 2.7K OHM	1	1	1	1
R314			CHIP RES.(1608) 1/10W J 820 OHM	1	1	1	1
R315			CHIP RES.(1608) 1/10W J 560 OHM	1	1	1	1
R316			CHIP RES.(1608) 1/10W J 100 OHM	1	1	1	1
R317			CHIP RES.(1608) 1/10W J 1.5K OHM	1	1	1	1
R318			CHIP RES.(1608) 1/10W J 4.7K OHM	1	1	1	1
R319			CHIP RES.(1608) 1/10W J 820 OHM	1	1	1	1
R320			CHIP RES.(1608) 1/10W J 150K OHM	1	1	1	1
R321			CHIP RES.(1608) 1/10W J 10K OHM	1	1	1	1
R322			CHIP RES.(1608) 1/10W J 2.2K OHM	1	1	1	1
R323			CHIP RES.(1608) 1/10W J 39K OHM	1	1	1	1
R324			CHIP RES.(1608) 1/10W J 560K OHM	1	1	1	1
R325			CARBON RES. 1/4W J 1K OHM	1	1	1	1
R327			CHIP RES.(1608) 1/10W J 4.7K OHM	1	1	1	1
R328			CHIP RES.(1608) 1/10W J 1K OHM	1	1	1	1
R329			CHIP RES.(1608) 1/10W J 8.2K OHM	1	1	1	1
R330			CHIP RES.(1608) 1/10W J 390 OHM	1	1	1	1
R332			CHIP RES.(1608) 1/10W 0 OHM	1	1	1	1

ELECTRICAL PARTS LIST				VR340/55	VR340/75	VR740/55	VR740/75
Pos.	▲	12 NC	Description				
R334			CHIP RES.(1608) 1/10W J 1.8K OHM	1	1	1	1
R335			CHIP RES.(1608) 1/10W J 1.2K OHM	1	1	1	1
R336			CHIP RES.(1608) 1/10W J 8.2K OHM	1	1	1	1
R340			CHIP RES.(1608) 1/10W J 6.8K OHM	1	1	1	1
R344			CHIP RES.(1608) 1/10W J 220 OHM	1	1	1	1
R372			CARBON RES. 1/4W J 1K OHM	1	1	1	1
R401			CHIP RES.(1608) 1/10W J 2.2K OHM	1	1	1	1
R402			CHIP RES.(1608) 1/10W J 6.8K OHM	1	1	1	1
R403			CHIP RES.(1608) 1/10W J 2.2K OHM	1	1	1	1
R404			CHIP RES.(1608) 1/10W J 2.7K OHM	1	1	1	1
R405			CHIP RES.(1608) 1/10W J 1K OHM	1	1	1	1
R406			CHIP RES.(1608) 1/10W J 22K OHM	1	1	1	1
R408			CHIP RES.(1608) 1/10W J 47K OHM	1	1	1	1
R409			CARBON RES. 1/6W J 100 OHM	1	1	1	1
R410			CARBON RES. 1/6W J 820 OHM	1	1	1	1
R414			CHIP RES.(1608) 1/10W J 22K OHM	1	1	1	1
R415			CHIP RES.(1608) 1/10W J 5.6K OHM	1	1	1	1
R416			CHIP RES.(1608) 1/10W J 12K OHM	1	1	1	1
R417			CHIP RES.(1608) 1/10W J 330K OHM	1	1	1	1
R418			CHIP RES.(1608) 1/10W J 120 OHM	1	1	1	1
R419			CHIP RES.(1608) 1/10W J 27K OHM	1	1	1	1
R420			CHIP RES.(1608) 1/10W J 910 OHM	1	1	1	1
R421			CHIP RES.(1608) 1/10W J 2.7K OHM			1	1
R421			CHIP RES.(1608) 1/10W J 3.3K OHM	1	1		
R422			CHIP RES.(1608) 1/10W J 22K OHM	1	1		
R422			CHIP RES.(1608) 1/10W J 5.6K OHM			1	1
R425			CHIP RES.(1608) 1/10W J 2.2M OHM	1	1	1	1
R430			CHIP RES.(1608) 1/10W J 27K OHM	1	1		
R431			CHIP RES.(1608) 1/10W J 3.3K OHM	1	1		
R432			CHIP RES.(1608) 1/10W 0 OHM	1	1	1	1
R451			CHIP RES.(1608) 1/10W J 6.8K OHM			1	1
R452			CHIP RES.(1608) 1/10W J 39K OHM			1	1
R453			CHIP RES.(1608) 1/10W J 470 OHM			1	1
R454			CHIP RES.(1608) 1/10W J 2.7K OHM			1	1
R455			CHIP RES.(1608) 1/10W J 220K OHM			1	1
R456			CHIP RES.(1608) 1/10W 0 OHM			1	1
R458			CHIP RES.(1608) 1/10W J 39K OHM			1	1
R459			CHIP RES.(1608) 1/10W J 6.8K OHM			1	1
R460			CHIP RES.(1608) 1/10W J 39K OHM			1	1
R461			CHIP RES.(1608) 1/10W J 6.8K OHM			1	1
R462			CHIP RES.(1608) 1/10W J 22K OHM			1	1
R463			CHIP RES.(1608) 1/10W J 8.2K OHM			1	1
R464			CHIP RES.(1608) 1/10W J 1K OHM			1	1
R465			CHIP RES.(1608) 1/10W J 1K OHM			1	1
R466			CHIP RES.(1608) 1/10W J 6.8K OHM			1	1
R467			CHIP RES.(1608) 1/10W J 39K OHM			1	1
R470			CHIP RES.(1608) 1/10W J 39K OHM			1	1
R471			CHIP RES.(1608) 1/10W J 6.8K OHM			1	1
R472			CHIP RES.(1608) 1/10W J 6.8K OHM			1	1
R473			CHIP RES.(1608) 1/10W J 39K OHM			1	1
R501			CHIP RES.(1608) 1/10W J 1K OHM	1	1	1	1
R502			CHIP RES.(1608) 1/10W J 1K OHM	1	1	1	1
R503			CHIP RES.(1608) 1/10W J 1K OHM	1	1	1	1
R504			CHIP RES.(1608) 1/10W J 10K OHM	1	1	1	1
R505			CHIP RES.(1608) 1/10W J 10K OHM	1	1	1	1
R506			CHIP RES.(1608) 1/10W J 10K OHM	1	1	1	1
R509			CHIP RES.(1608) 1/10W J 4.7K OHM	1	1	1	1
R511			CHIP RES.(1608) 1/10W J 100K OHM	1	1	1	1
R513			CHIP RES.(1608) 1/10W J 1.8K OHM	1	1	1	1
R514			CHIP RES.(1608) 1/10W J 820 OHM	1	1	1	1
R516			CHIP RES.(1608) 1/10W J 330K OHM	1	1	1	1
R517			CHIP RES.(1608) 1/10W J 560 OHM	1	1	1	1
R518			CHIP RES.(1608) 1/10W J 470 OHM	1	1	1	1
R519			CHIP RES.(1608) 1/10W J 470 OHM	1	1	1	1

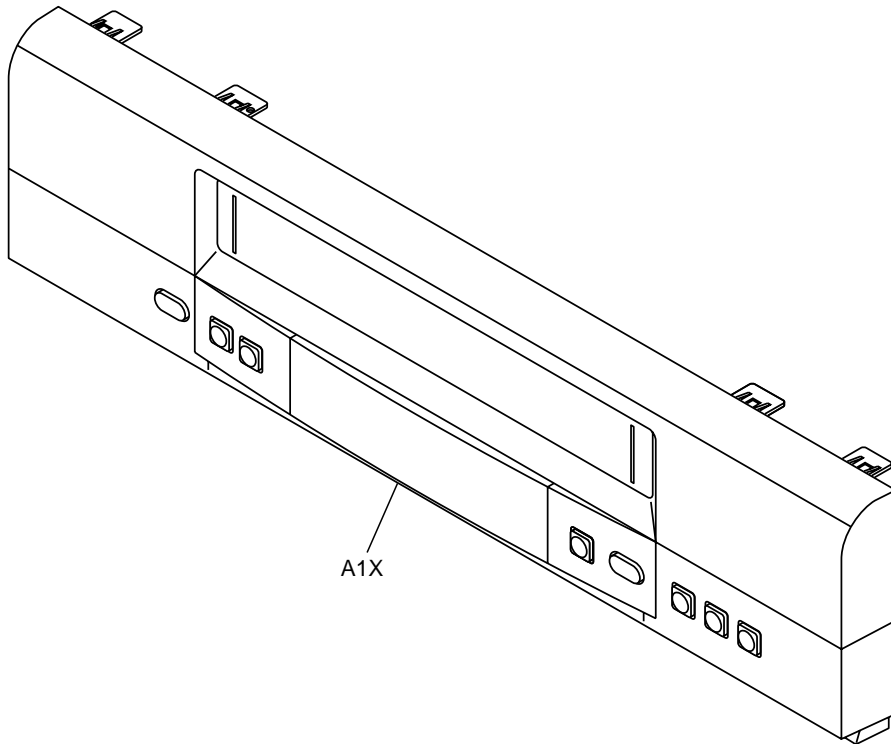
ELECTRICAL PARTS LIST				VR340/55	VR340/75	VR740/55	VR740/75
Pos.	▲	12 NC	Description				
R520			CHIP RES.(1608) 1/10W J 10K OHM	1	1	1	1
R521			CHIP RES.(1608) 1/10W J 220K OHM	1	1	1	1
R522			CHIP RES.(1608) 1/10W J 39K OHM	1	1	1	1
R523			CHIP RES.(1608) 1/10W J 10K OHM	1	1	1	1
R524			CHIP RES.(1608) 1/10W J 10K OHM	1	1	1	1
R525			CHIP RES.(1608) 1/10W J 1.5K OHM	1	1	1	1
R526			CHIP RES.(1608) 1/10W J 1.8K OHM	1	1	1	1
R527			CHIP RES.(1608) 1/10W J 680 OHM	1	1	1	1
R528			CHIP RES.(1608) 1/10W J 18K OHM	1	1	1	1
R529			CARBON RES. 1/4W J 270 OHM	1	1	1	1
R530			CHIP RES.(1608) 1/10W J 10K OHM	1	1	1	1
R533			CHIP RES.(1608) 1/10W J 33K OHM	1	1	1	1
R534			CARBON RES. 1/6W G 3.6K OHM	1	1	1	1
R535			CARBON RES. 1/6W G 10K OHM	1	1	1	1
R536			CARBON RES. 1/6W G 470 OHM	1	1	1	1
R537			CARBON RES. 1/6W G 22K OHM	1	1	1	1
R538			CARBON RES. 1/6W G 1.5K OHM	1	1	1	1
R539			CARBON RES. 1/6W G 4.7K OHM	1	1	1	1
R540			CHIP RES.(1608) 1/10W J 390K OHM	1	1	1	1
R541			CHIP RES.(1608) 1/10W J 390K OHM	1	1	1	1
R542			CHIP RES.(1608) 1/10W J 1.8K OHM	1	1	1	1
R543			CHIP RES.(1608) 1/10W J 1K OHM	1	1	1	1
R544			CHIP RES.(1608) 1/10W J 2.7K OHM	1	1	1	1
R545			CHIP RES.(1608) 1/10W J 2.2K OHM	1	1	1	1
R546			CHIP RES.(1608) 1/10W J 12K OHM	1	1	1	1
R547			CHIP RES.(1608) 1/10W J 1.8K OHM	1	1	1	1
R548			CHIP RES.(1608) 1/10W J 1K OHM	1	1	1	1
R549			CHIP RES.(1608) 1/10W J 1.2K OHM	1	1	1	1
R555			CHIP RES.(1608) 1/10W J 10K OHM	1		1	
R556			CHIP RES.(1608) 1/10W J 10K OHM		1		1
R557			CHIP RES.(1608) 1/10W J 10K OHM	1	1	1	1
R566			CHIP RES.(1608) 1/10W J 56K OHM	1	1	1	1
R601			CHIP RES.(1608) 1/10W J 10K OHM	1	1		
R605			CHIP RES.(1608) 1/10W J 10K OHM	1	1	1	1
R611			CHIP RES.(1608) 1/10W J 10K OHM			1	1
R612			CHIP RES.(1608) 1/10W J 10K OHM	1	1		
R618			CHIP RES.(1608) 1/10W J 10K OHM	1	1	1	1
R620			CHIP RES.(1608) 1/10W J 10K OHM	1	1	1	1
R621			CHIP RES.(1608) 1/10W J 10K OHM	1	1	1	1
R623			CHIP RES.(1608) 1/10W J 10K OHM	1	1		
R624			CHIP RES.(1608) 1/10W J 10K OHM			1	1
R706			CARBON RES. 1/4W J 1K OHM	1	1	1	1
R707			CARBON RES. 1/4W J 1K OHM	1	1	1	1
R714			CARBON RES. 1/4W J 1K OHM	1	1	1	1
R751			CHIP RES.(1608) 1/10W J 150 OHM	1	1	1	1
R752			CARBON RES. 1/6W J 150 OHM	1	1	1	1
R754			CHIP RES.(1608) 1/10W J 75 OHM	1	1	1	1
R755			CHIP RES.(1608) 1/10W J 75 OHM	1	1	1	1
R756			CARBON RES. 1/6W J 75 OHM			1	1
R851			CHIP RES.(1608) 1/10W J 1.5K OHM	1	1	1	1
R852			CHIP RES.(1608) 1/10W J 1K OHM	1	1	1	1
R853			CHIP RES.(1608) 1/10W J 1K OHM	1	1	1	1
RS501		9965 000 12191	REMOTE RECEIVER MIM-93M9DKF	1	1	1	1
SA001	▲	9965 000 08602	SURGE ABSORBER CNR-10D471K	1	1	1	1
SWITCHES							
SW501		4822 276 13954	TACT SWITCH KSM0614B	1	1		
SW502		4822 276 13954	TACT SWITCH KSM0614B	1	1	1	1
SW503		4822 276 13954	TACT SWITCH KSM0614B	1	1	1	1
SW505		4822 276 13954	TACT SWITCH KSM0614B	1	1	1	1
SW506		9965 000 16625	LEAF SWITCH MXS01830MVP0	1	1	1	1
SW507		9965 000 16626	ROTARY MODE SWITCH SSS-50MD	1	1	1	1
SW509		4822 276 13954	TACT SWITCH KSM0614B	1	1		
SW510		4822 276 13954	TACT SWITCH KSM0614B	1	1	1	1
SW511		4822 276 13954	TACT SWITCH KSM0614B	1	1	1	1

ELECTRICAL PARTS LIST				VR340/55	VR340/75	VR740/55	VR740/75
Pos.	▲	12 NC	Description				
SW512		4822 276 13954	TACT SWITCH KSM0614B	1	1	1	1
T001	▲	9965 000 16627	SWITCHING TRANSFORMER CSA-SW0233A		1		1
T001	▲	9965 000 17327	SWITCHING TRANSFORMER CSA-SW0253C	1		1	
TP301			PCB JUMPER D0.6-P10.0	1	1	1	1
TP501			PCB JUMPER D0.6-P6.0	1	1	1	1
TP502			PCB JUMPER D0.6-P9.0	1	1	1	1
TP505			PCB JUMPER D0.6-P5.0	1	1	1	1
TP507			PCB JUMPER D0.6-P6.0	1	1	1	1
TP751			PCB JUMPER D0.6-P19.0	1	1	1	1
TP752			PCB JUMPER D0.6-P5.5	1	1	1	1
TP754			PCB JUMPER D0.6-P5.5	1	1	1	1
TU701		9965 000 12893	TUNER UNIT TMDG1-632A		1		
TU701		9965 000 12265	TUNER UNIT TMDG2-631A				1
TU701		9965 000 13684	TUNER UNIT TMDG2-837A	1		1	
VR501		9965 000 05260	CARBON P.O.T. 100K OHM B	1	1	1	1
X302		9965 000 05629	X'TAL 4.433619MHZ	1	1	1	1
X501		9965 000 12194	X'TAL 12.000MHZ	1	1	1	1
X502		9965 000 12288	X'TAL 32.768KHZ(20PPM)	1	1	1	1
			SW1 CBA (MCV-C)			1	1
SW513		4822 276 13954	TACT SWITCH KSM0614B			1	1
JW001		9965 000 13680	FLAT CABLE, 2P AWG26#2651/P1.25/120			1	1
			SW2 CBA (MCV-E)			1	1
SW514		4822 276 13954	TACT SWITCH KSM0614B			1	1
JW002		9965 000 17216	FLAT CABLE, 2P AWG26#2651/P1.25/140			1	1
SENSOR CBA							
			SENSOR CBA	1	1	1	1
Q504		9965 000 08630	PHOTO TRANSISTOR PT204-6B-12	1	1	1	1
Q505		9965 000 08630	PHOTO TRANSISTOR PT204-6B-12	1	1	1	1

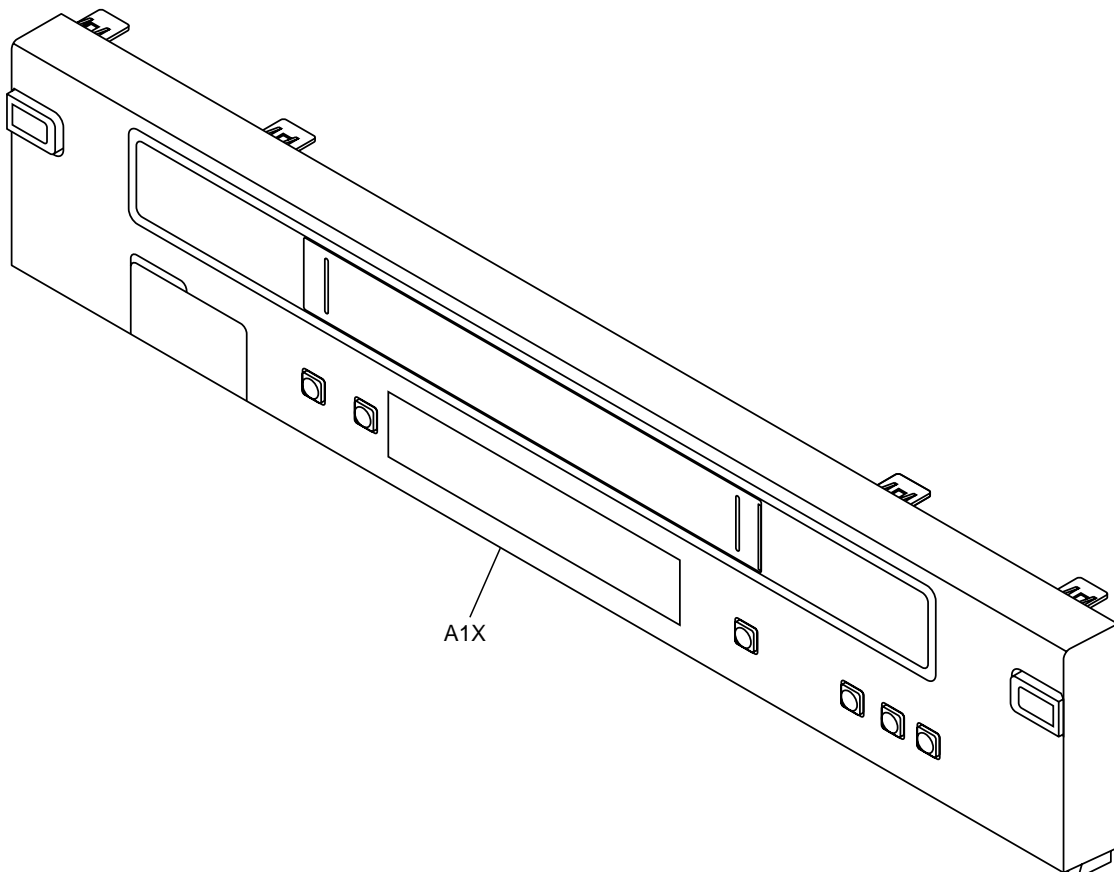
EXPLODED VIEWS

Front Panel

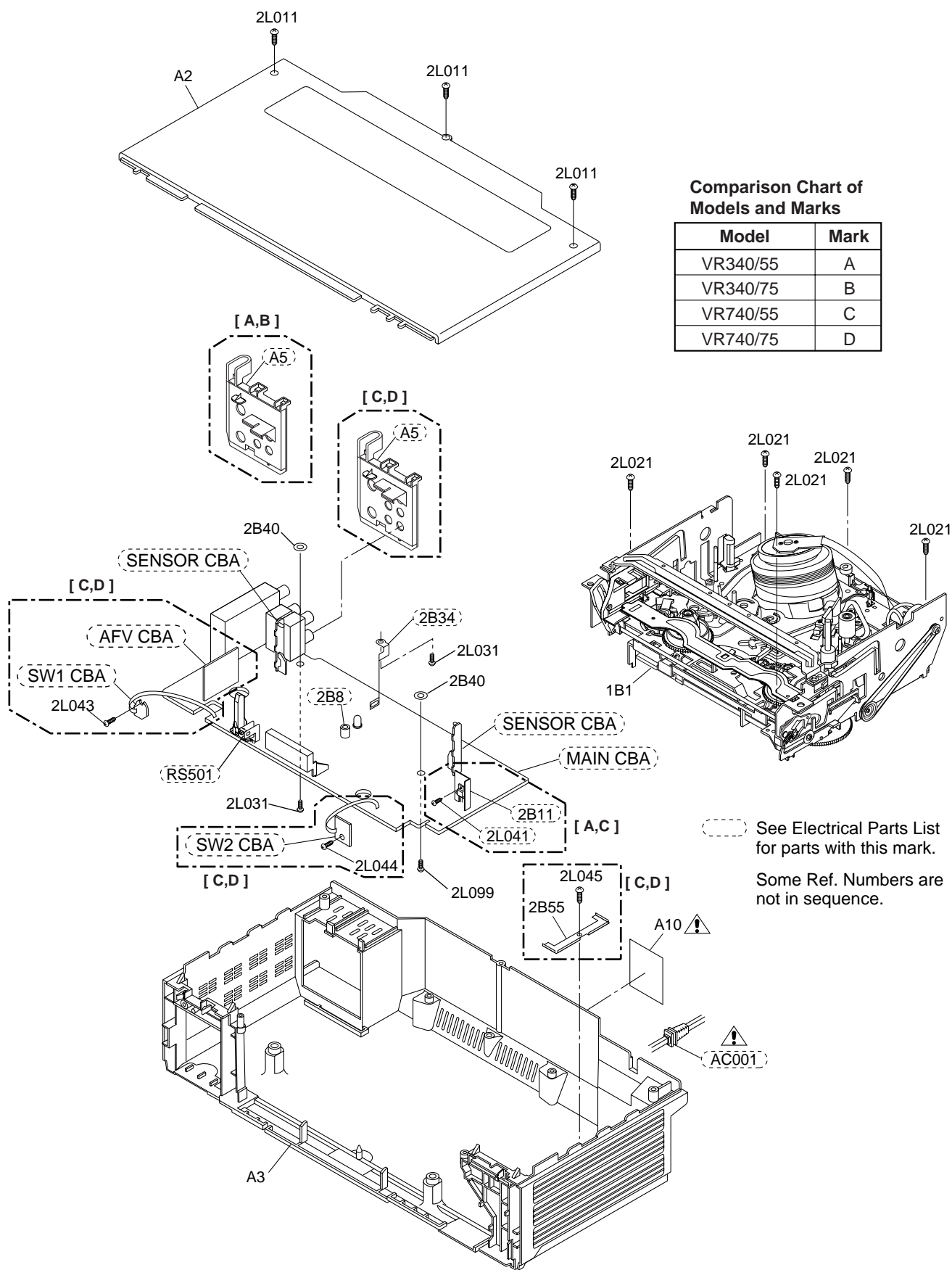
[VR340/ (55, 75)]



[VR740/ (55, 75)]

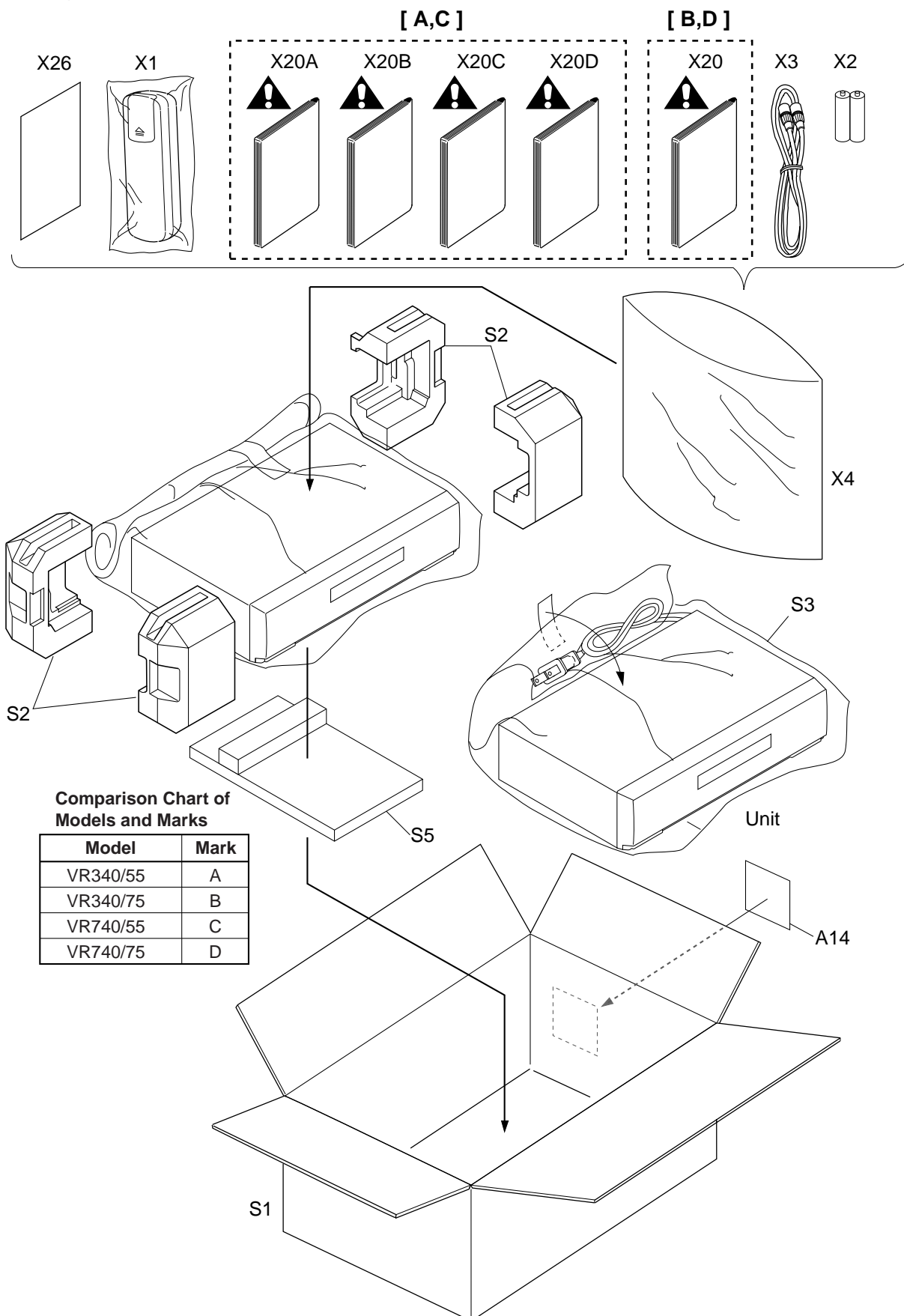


Cabinet



Packing

Some Ref. Numbers are not in sequence.



PRODUCT SAFETY NOTE: Products marked with a ▲

have special characteristics important to safety.

Before replacing any of these components, read carefully

the product safety notice in this service manual.

Don't degrade the safety of the product through improper servicing.

MECHANICAL PARTS LIST				VR140/02	VR140/07	VR840/39	VR840/58
Pos.	▲	12 NC	Description				
A1X		9965 000 17322	FRONT ASSEMBLY HE274PD	1			
A1X		9965 000 17328	FRONT ASSEMBLY HE275AD		1		
A1X		9965 000 17329	FRONT ASSEMBLY HE494PD			1	
A1X		9965 000 17333	FRONT ASSEMBLY HE495AD				1
A2		9965 000 17323	CASE, TOP HB465UD	1	1		
A2		9965 000 13699	CASE, TOP HB4N0JD			1	1
A3		9965 000 17324	CHASSIS HE275AD	1	1		
A3		9965 000 17330	CHASSIS(435MM) HE495AD			1	1
A14			LABEL, BAR CODE HE274PD	1			
A14			LABEL, BAR CODE HE275AD		1		
A14			LABEL, BAR CODE HE494PD			1	
A14			LABEL, BAR CODE HE495AD				1
A10	▲		LABEL, RATING HE274PD	1			
A10	▲		LABEL, RATING HE275AD		1		
A10	▲		LABEL, RATING HE494PD			1	
A10	▲		LABEL, RATING HE495AD				1
1B1			DECK ASSEMBLY CZD012/VM1720	1	1		
1B1			DECK ASSEMBLY CZD012/VM1760			1	1
2L011		4822 502 14666	SCREW, P-TIGHT 3X10 BIND HEAD+	1	1	1	1
2L021		4822 502 30752	SCREW, P-TIGHT M3X10 WASHER HEAD+	1	1	1	1
2L031		9965 000 12171	SCREW, B-TIGHT M3X8 BIND HEAD+	1	1	1	1
2L043		4822 502 14012	P-TIGHT SCREW 3X8 BIND +			1	1
2L044		4822 502 14012	P-TIGHT SCREW 3X8 BIND +			1	1
2L099		9965 000 13027	SCREW, P-TIGHT M3X8 BIND HEAD+	1	1	1	1
			PACKING				
S1			GIFT BOX CARTON HE274PD	1			
S1			GIFT BOX CARTON HE275AD		1		
S1			GIFT BOX CARTON HE494PD			1	
S1			GIFT BOX CARTON HE495AD				1
S2			STYROFOAM HB300UD	1			
S2			STYROFOAM HB4P0UD		1		
S2			STYROFOAM(KID-U23LC) H79P0UD			1	1
S3			UNIT, BAG E5500UD			1	1
S3			UNIT, BAG V4010PA	1	1		
S5			PAD HB200UD	1	1		
S5			PAD HB4P0UD			1	1
X1			REMOTE CONTROL UNIT 364/CRC006	1	1		
X1			REMOTE CONTROL UNIT 364/CRC006			1	1
X1		9965 000 13675	REMOTE CONTROL UNIT 364/CRC006	1	1		
X1		9965 000 17331	REMOTE CONTROL UNIT 364/CRC006			1	1
X3		4822 322 10137	RF CABLE LP-PAL-960601	1	1	1	1
X4			ACCESSORY BAG H3600UD T=0.03	1	1	1	1

DECK MECHANISM SECTION

VIDEO CASSETTE RECORDER

Sec. 2: Deck Mechanism Section

- Standard Maintenance
 - Mechanism Alignment Procedures
 - Disassembly / Assembly of Mechanism
 - Deck Exploded Views
 - Deck Parts List

TABLE OF CONTENTS

STANDARD MAINTENANCE	2-1-1
SERVICE FIXTURE AND TOOLS	2-2-1
MECHANICAL ALIGNMENT PROCEDURES	2-3-1
DISASSEMBLY / ASSEMBLY PROCEDURES OF DECK MECHANISM	2-4-1
ALIGNMENT PROCEDURES OF MECHANISM	2-4-9
DECK EXPLODED VIEWS	2-5-1
DECK PARTS LIST	2-6-1

STANDARD MAINTENANCE

Service Schedule of Components

H: Hours ○ : Check ● : Change

Deck		Periodic Service Schedule			
Ref.No.	Part Name	1,000 H	2,000 H	3,000 H	4,000 H
B2	Cylinder Assembly	○	●	○	●
B3	Loading Motor Assembly			●	
B8	Pulley Assembly		●		●
B587	Tension Lever Assembly		●		●
B31	AC Head Assembly			●	
B573,B574	Reel (SP)(D2), Reel (TU)(D2)			●	
B37	Capstan Motor		●		●
B52	Cap Belt		●		●
*B73	FE Head			●	
B133,B134	Idler Gear, Idler Arm		●		●
B410	Pinch Arm Assembly		●		●
B414	M Brake (SP) Assembly		●		●
B416	M Brake (TU) Assembly		●		●
B525	LDG Belt		●		●
B569 (2 head only)	Cam Holder (F)		●		●
B593 (4 head, 4 head HiFi only)	Cam Holder (F) Assembly		●		●

Notes:

- 1.Clean all parts for the tape transport (Upper Drum with Video Head / Pinch Roller / Audio Control Head / Full Erase Head) using 90% Isopropyl Alcohol.
 - 2.After cleaning the parts, do all DECK ADJUSTMENTS.
 - 3.For the reference numbers listed above, refer to Deck Exploded Views.
- * B73 ----- Recording Model only

Cleaning

Cleaning of Video Head

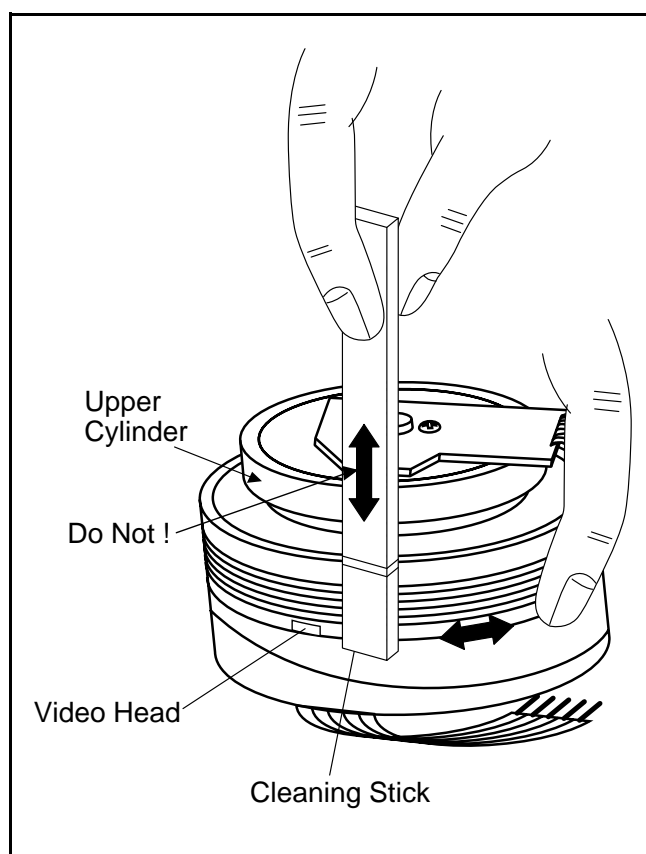
Clean the head with a head cleaning stick or chamois cloth.

Procedure

- 1.Remove the top cabinet.
- 2.Put on a glove (thin type) to avoid touching the upper and lower drum with your bare hand.
- 3.Put a few drops of 90% Isopropyl alcohol on the head cleaning stick or on the chamois cloth and, by slightly pressing it against the head tip, turn the upper drum to the right and to the left.

Notes:

- 1.The video head surface is made of very hard material, but since it is very thin, avoid cleaning it vertically.
- 2.Wait for the cleaned part to dry thoroughly before operating the unit.
- 3.Do not reuse a stained head cleaning stick or a stained chamois cloth.



Cleaning of Audio Control Head

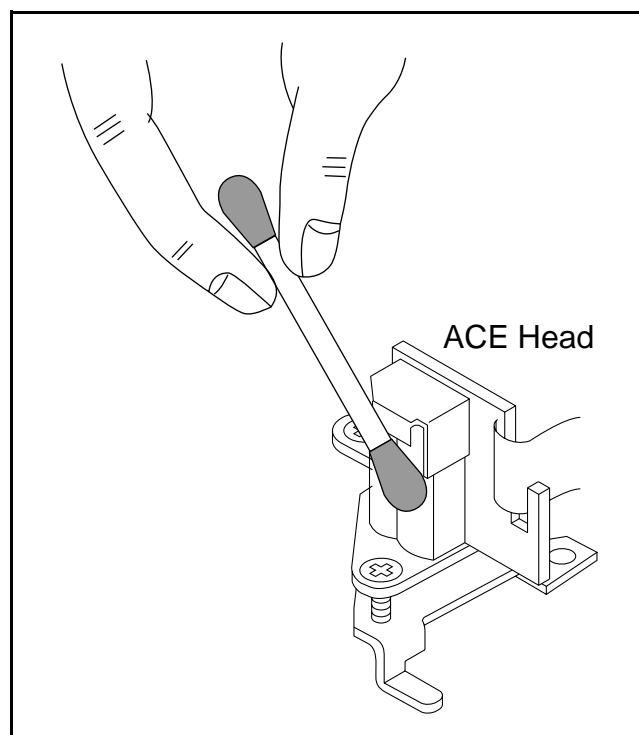
Clean the head with a cotton swab.

Procedure

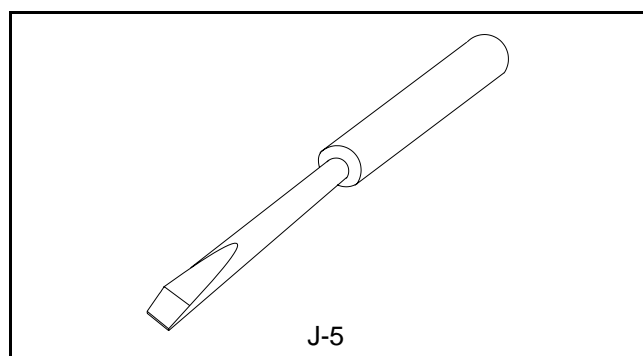
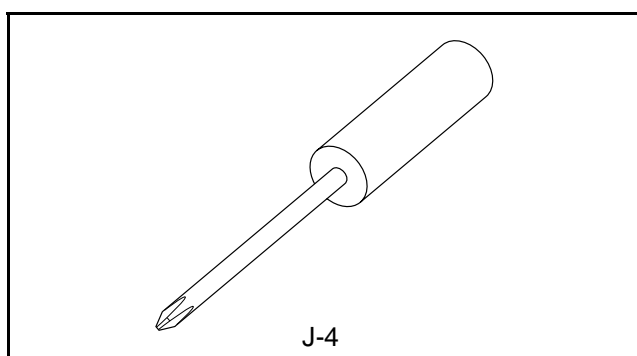
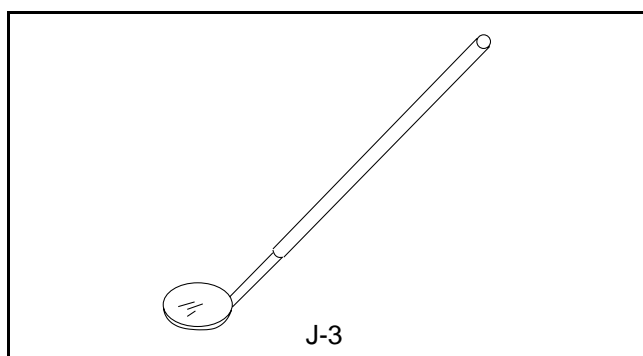
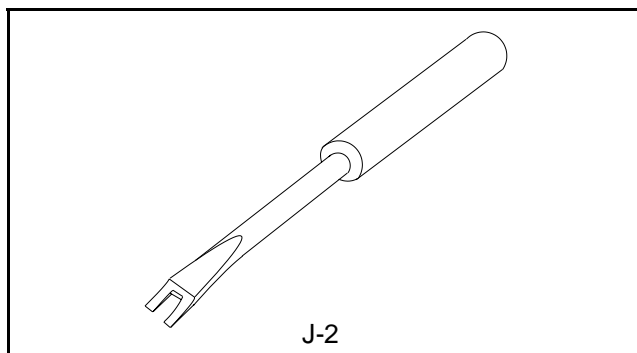
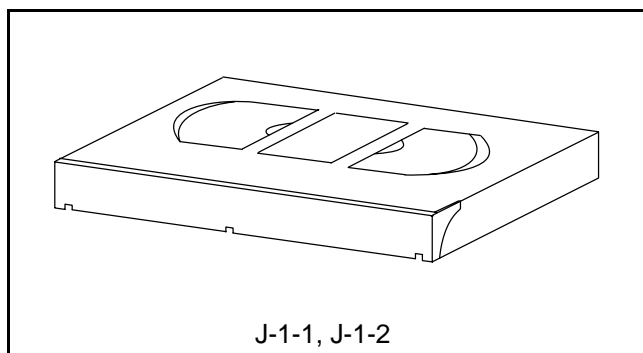
- 1.Remove the top cabinet.
- 2.Dip the cotton swab in 90% isopropyl alcohol and clean the audio control head. Be careful not to damage the upper drum and other tape running parts.

Notes:

- 1.Avoid cleaning the audio control head vertically.
- 2.Wait for the cleaned part to dry thoroughly before operating the unit or damage may occur.



SERVICE FIXTURE AND TOOLS



Ref. No.	Name	Part No.	Adjustment
J-1-1	Alignment Tape	FL6A	Electrical Adjustments
J-1-2	Alignment Tape	FL6N8 (2 Head model) FL6NS8 (4 Head model)	Azimuth and X Value Adjustment of Audio Control Head / Adjustment of Envelope Waveform
J-2	Guide Roller Adj.Screwdriver	Available Locally	Guide Roller
J-3	Mirror	Available Locally	Tape Transportation Check
J-4	Azimuth Adj.Screwdriver +	Available Locally	A/C Head Height
J-5	X Value Adj.Screwdriver -	Available Locally	X Value

MECHANICAL ALIGNMENT PROCEDURES

Explanation of alignment for the tape to correctly run starts on the next page. Refer to the information below on this page if a tape gets stuck, for example, in the mechanism due to some electrical trouble of the unit.

Service Information

A. Method for Manual Tape Loading/Unloading

To load a cassette tape manually:

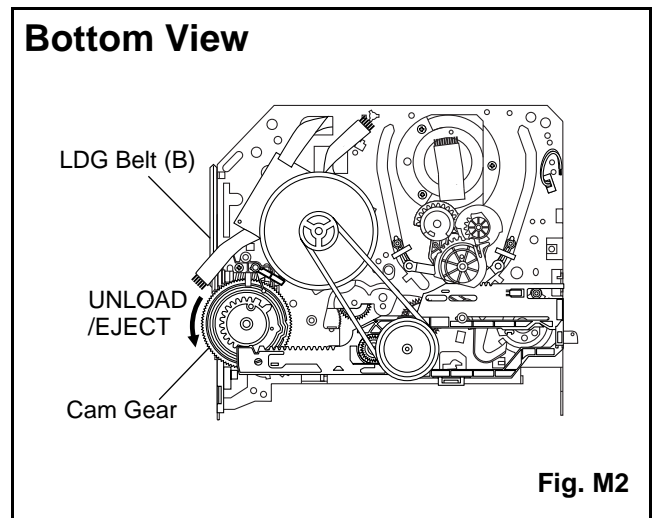
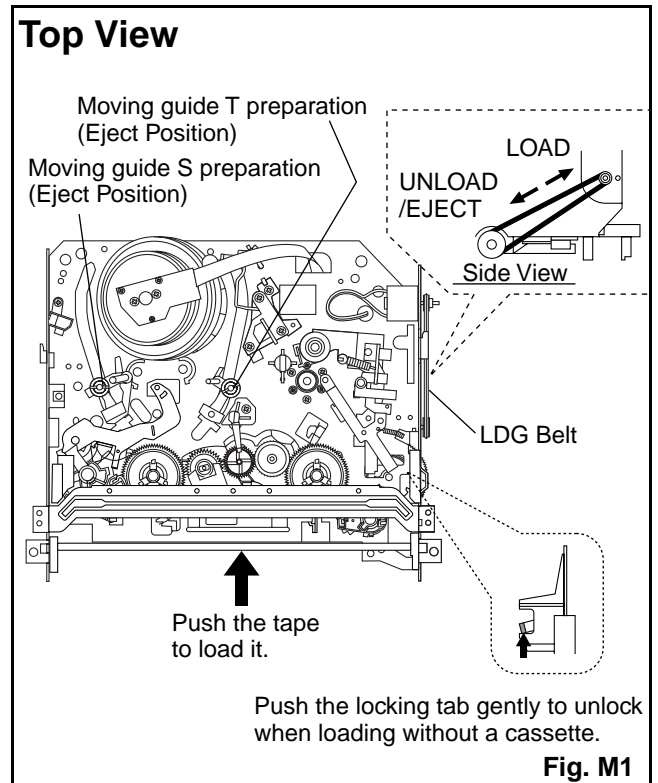
1. Disconnect the AC plug.
2. Remove the Top Case and Front Assembly.
3. Insert a cassette tape. Though the tape will not be automatically loaded, make sure that the cassette tape is all the way in at the inlet of the Cassette Holder. To confirm this, lightly push the cassette tape further in and see if the tape comes back out, by a spring motion, just as much as you have pushed in.
4. Turn the LDG Belt in the appropriate direction shown in Fig. M1 for a minute or two to complete this task.

To unload a cassette tape manually:

1. Disconnect the AC plug.
2. Remove the Top Case and Front Assembly.
3. Make sure that the Moving guide preparations are in the Eject Position.
4. Turn the LDG Belt in the appropriate direction shown in Fig. M1 until the Moving guide preparations come to the Eject Position. Stop turning when the preparations begin clicking or can not be moved further. However, the tape will be left wound around the cylinder.
5. Turn the LDG Belt in the appropriate direction continuously, and the cassette tape will be ejected. Allow a minute or two to complete this task.

B. Method to place the Cassette Holder in the tape-loaded position without a cassette tape

1. Disconnect the AC Plug.
2. Remove the Top Case and Front Assembly.
3. Turn the LDG Belt in the appropriate direction shown in Fig. M1. Release the locking tabs shown in Fig. M1 and continue turning the LDG Belt until the Cassette Holder comes to the tape-loaded position. Allow a minute or two to complete this task.



1.Tape Interchangeability Alignment

Note:

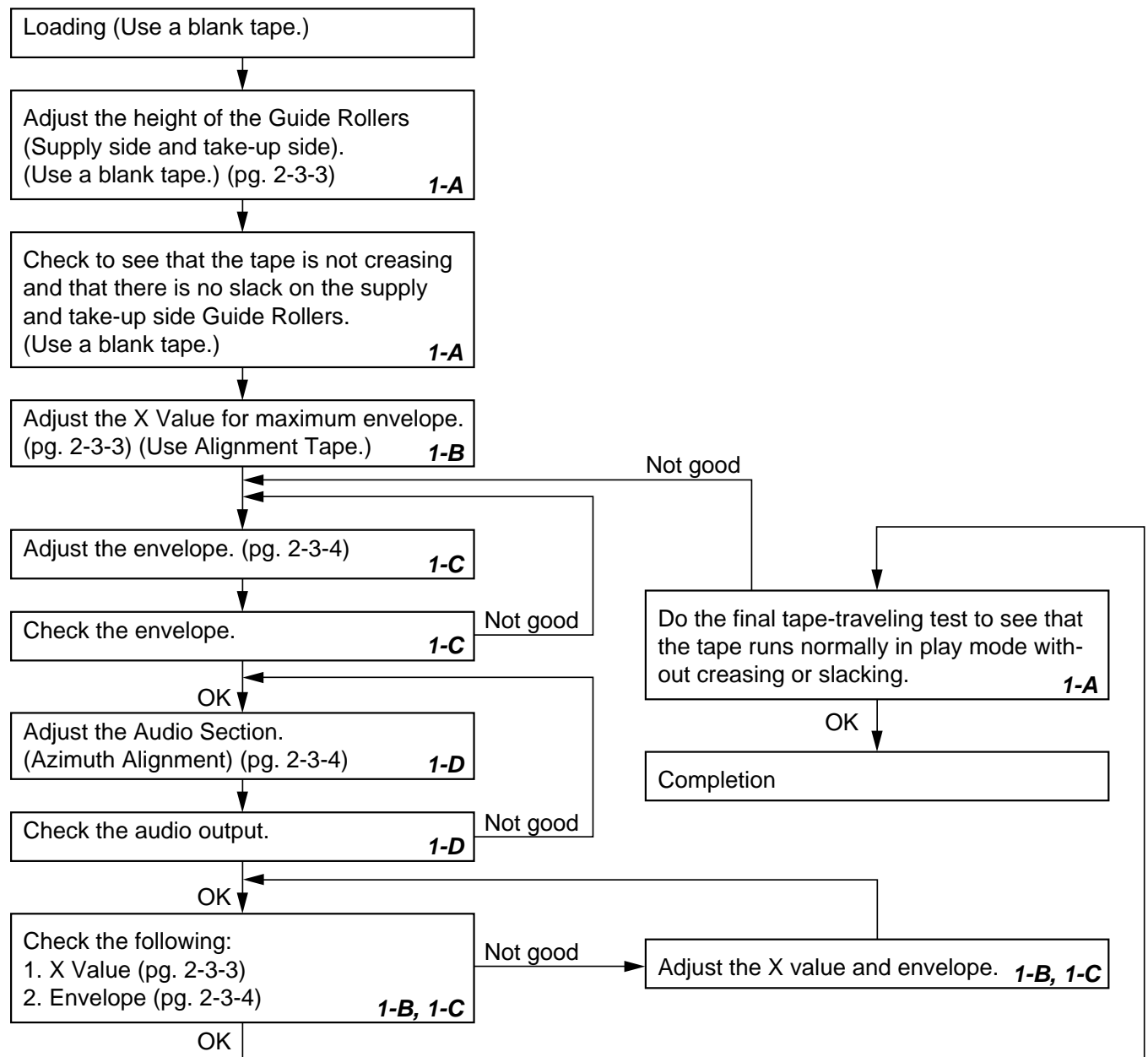
To do these alignment procedures, make sure that the Tracking Control Circuit is set to the center position every time a tape is loaded or unloaded. (Refer to page 2-3-4, procedure 1-C, step 2.)

Equipment required:

Dual Trace Oscilloscope
VHS Alignment Tape (FL6NS8)
Guide Roller Adj. Screwdriver
X-Value Adj. Screwdriver

Note: Before starting this Mechanical Alignment, do all Electrical Adjustment procedures.

Flowchart of Alignment for tape traveling



1-A. Preliminary/Final Checking and Alignment of Tape Path

Purpose:

To make sure that the tape path is well stabilized.

Symptom of Misalignment:

If the tape path is unstable, the tape will be damaged.

Note: Do not use an Alignment Tape for this procedure. If the unit is not correctly aligned, the tape may be damaged.

1. Playback a blank cassette tape and check to see that the tape runs without creasing at Guide Rollers [2] and [3], and at points A and B on the lead surface. (Refer to Fig. M3 and M4.)
2. If creasing is apparent, align the height of the guide rollers by turning the top of Guide Rollers [2] and [3] with a Guide Roller Adj. Screwdriver. (Refer to Fig. M3 and M5.)

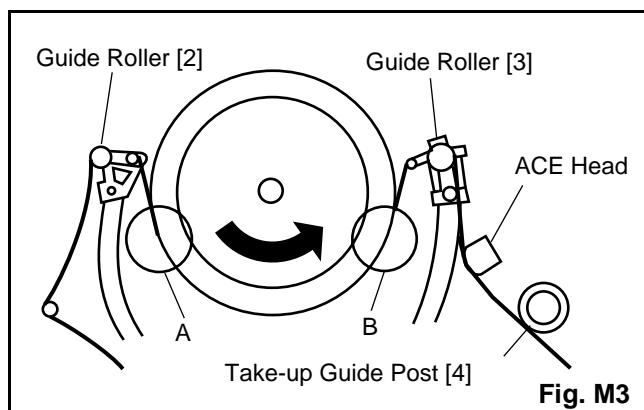


Fig. M3

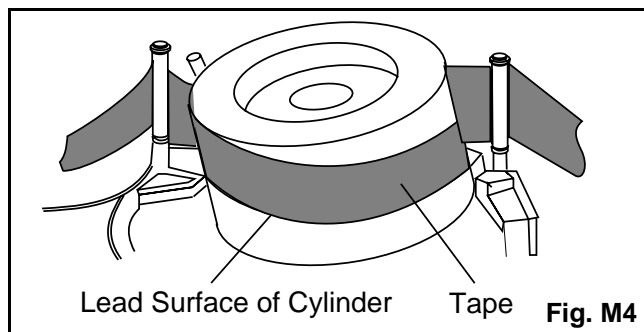


Fig. M4

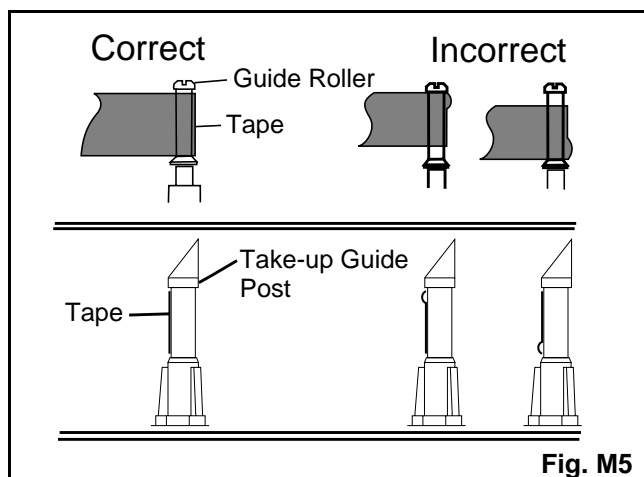


Fig. M5

3. Check to see that the tape runs without creasing at Take-up Guide Post [4] or without snaking between Guide Roller [3] and AC Head. (Fig. M3 and M5)
4. If creasing or snaking is apparent, adjust the Tilt Adj. Screw of the AC Head. (Fig. M6)

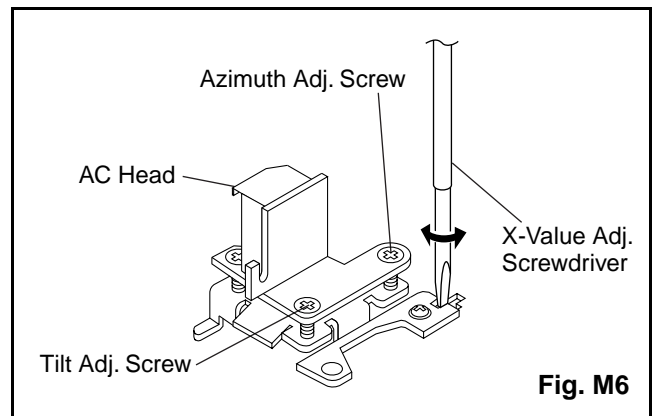


Fig. M6

1-B. X Value Alignment

Purpose:

To align the Horizontal Position of the Audio/Control/ Erase Head.

Symptom of Misalignment:

If the Horizontal Position of the Audio/Control/Erase Head is not properly aligned, maximum envelope cannot be obtained at the Neutral position of the Tracking Control Circuit.

1. Connect the oscilloscope to TP301 (C-PB) and TP501 (CTL) on the Main CBA. Use TP502 (RF-SW) as a trigger.
2. Playback the Gray Scale of the Alignment Tape (FL6NS8) and confirm that the PB FM signal is present.
3. Set the Tracking Control Circuit to the center position by pressing CH UP button then "PLAY" button on the unit. (Refer to note on bottom of page 2-3-4.)
4. Use the X-Value Adj. Screwdriver so that the PB FM signal at TP301 (C-PB) is maximum. (Fig. M6)
5. Press CH UP button on the unit until the CTL waveform has shifted by approx. +2msec. Make sure that the envelope is simply attenuated (shrinks in height) during this process so that you will know the envelope has been at its peak.

6. Press CH DOWN button on the unit until the CTL waveform has shifted from its original position (not the position achieved in step 5, but the position of CTL waveform in step 4) by approximately -2msec. Make sure that the envelope is simply attenuated (shrinks in height) once CTL waveform passes its original position and is further brought in the minus direction.
7. Set the Tracking Control Circuit to the center position by pressing CH UP button and then "PLAY" button.

1-C. Checking/Adjustment of Envelope Waveform

Purpose:

To achieve a satisfactory picture and precise tracking.

Symptom of Misalignment:

If the envelope output is poor, noise will appear in the picture. The tracking will then lose precision and the playback picture will be distorted by any slight variation of the Tracking Control Circuit.

1. Connect the oscilloscope to TP301 (C-PB) on the Main CBA. Use TP502 (RF-SW) as a trigger.
2. Playback the Gray Scale on the Alignment Tape (FL6NS8). Set the Tracking Control Circuit to the center position by pressing CH UP button and then "PLAY" button on the unit. Adjust the height of Guide Rollers [2] and [3] (Fig. M3, Page 2-3-3) watching the oscilloscope display so that the envelope becomes as flat as possible. To do this adjustment, turn the top of the Guide Roller with the Guide Roller Adj. Screwdriver.
3. If the envelope is as shown in Fig. M7, adjust the height of Guide Roller [2] (Refer to Fig. M3) so that the waveform looks like the one shown in Fig. M9.
4. If the envelope is as shown in Fig. M8, adjust the height of Guide Roller [3] (Refer to Fig. M3) so that the waveform looks like the one shown in Fig. M9.
5. When Guide Rollers [2] and [3] (Refer to Fig. M3) are aligned properly, there is no envelope drop either at the beginning or end of track as shown in Fig. M9.

Note: Upon completion of the adjustment of Guide Rollers [2] and [3] (Refer to Fig. M3), check the X Value by pushing the CH UP or DOWN buttons alternately, to check the symmetry of the envelope. Check the number of pushes to ensure center position. The number of pushes CH UP button to achieve 1/2 level of envelope should match the number of pushes CH DOWN button from center. If required, redo the "X Value Alignment."

1-D. Azimuth Alignment of Audio/Control/ Erase Head

Purpose:

To correct the Azimuth alignment so that the Audio/Control/Erase Head meets tape tracks properly.

Symptom of Misalignment:

If the position of the Audio/Control/Erase Head is not properly aligned, the Audio S/N Ratio or Frequency Response will be poor.

1. Connect the oscilloscope to the audio output jack on the rear side of the deck.
2. Playback the alignment tape (FL6NS8) and confirm that the audio signal output level is 6kHz.
3. Adjust Azimuth Adj. Screw so that the output level on the AC Voltmeter or the waveform on the oscilloscope is at maximum. (Fig. M6)

Dropping envelope level at the beginning of track.

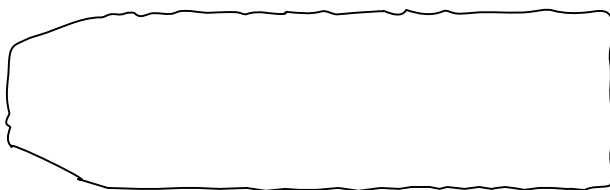


Fig. M7

Dropping envelope level at the end of track.

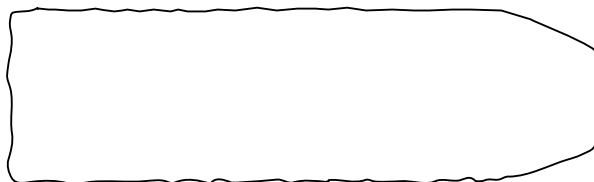


Fig. M8

Envelope is adjusted properly. (No envelope drop)

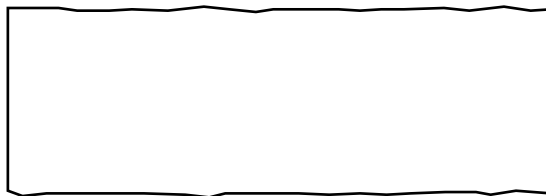


Fig. M9

DISASSEMBLY/ASSEMBLY PROCEDURES OF DECK MECHANISM

Before following the procedures described below, be sure to remove the deck assembly from the cabinet. (Refer to CABINET DISASSEMBLY INSTRUCTIONS on page 1-8-1.)

All the following procedures, including those for adjustment and replacement of parts, should be done in Eject mode; see the positions of [41] and [42] in Fig.DM1 on page 2-4-3. When reassembling, follow the steps in reverse order.

STEP /LOC. No.	START- ING No.	PART		REMOVAL		INSTALLATION
				Fig. No.	REMOVE/*UNHOOK/ UNLOCK/RELEASE/ UNPLUG/DESOLDER	ADJUSTMENT CONDITION
[1]	[1]	Guide Holder A	T	DM3	2(S-1)	
[2]	[1]	Cassette Holder Assembly	T	DM4		
[3]	[2]	Slider (SP)	T	DM5	*(L-1)	
[4]	[2]	Slider (TU)	T	DM5	*(L-2)	
[5]	[4]	Lock Lever	T	DM5	*(L-3), *(P-1)	
[6]	[2]	Cassette Plate	T	DM5		
[7]	[7]	Cylinder Assembly	T	DM1,DM6	Desolder, 3(S-2)	
[8]	[8]	Loading Motor Assembly	T	DM1,DM7	Desolder, LDG Belt, 2(S-3)	
[9]	[9]	AC Head Assembly	T	DM1,DM7	(S-4)	
[10]	[2]	Tape Guide Arm Assembly	T	DM1,DM8	*(P-2)	
[11]	[10]	C Door Opener	T	DM1,DM8	*(L-4)	
[12]	[11]	Pinch Arm (B)	T	DM1,DM8	*(P-3)	
[13]	[12]	Pinch Arm Assembly	T	DM1,DM8		
[14]	[14]	FE Head Assembly	T	DM1,DM9	(S-5)	
[15]	[15]	Prism	T	DM1,DM9	(S-6)	
[16]	[2],[15]	Sensor Gear	T	DM1,DM15		
[17]	[2]	Slider Shaft	T	DM10	*(L-5)	
[18]	[17]	C Drive Lever (SP)	T	DM10		
[19]	[17]	C Drive Lever (TU)	T	DM10	(S-7),*(P-4)	
[20]	[7],[8], [10]	Capstan Motor	B	DM2,DM11	3(S-8), Cap Belt	
[21]	[21]	Clutch Assembly	B	DM2,DM12	(C-1)	
[22]	[22]	Cam Holder (F) Assembly	B	DM2,DM12	*(L-6)	
[23]	[23]	Cam Gear (B)	B	DM2,DM12	(C-4)*(P-5)	
[24]	[24]	Mode Gear	B	DM2,DM13	(C-2)	
[25]	[21],[23], [24]	Mode Lever	B	DM2,DM13	(C-3), *(L-8)	
[26]	[22]	Worm Holder	B	DM2,DM13	(S-9),*(L-9),*(L-10)	
[27]	[26]	Pulley Assembly	B	DM2,DM13		
[28]	[25],[26]	Cam Gear (A)	B	DM2,DM13		
[29]	[25]	Idler Gear	B	DM1,DM14		
[30]	[29]	Idler Arm	B	DM1,DM14	*(L-11)	
[31]	[25]	BT Arm	B	DM2,DM14	*(P-6)	
[32]	[25]	Loading Arm (SP) Assembly	B	DM2,DM14		(+)Refer to Alignment Sec.Pg.2-4-9

STEP /LOC. No.	START- ING No.	PART		REMOVAL		INSTALLATION
				Fig. No.	REMOVE/*UNHOOK/ UNLOCK/RELEASE/ UNPLUG/DESOLDER	ADJUSTMENT CONDITION
[33]	[32]	Loading Arm (TU) Assembly	B	DM2,DM14		(+)Refer to Alignment Sec.Pg.2-4-9
[34]	[2],[25]	M Brake (TU) Assembly	T	DM1,DM15	*(P-7), Brake Belt	
[35]	[2],[25]	M Brake (SP) Assembly	T	DM1,DM15	*(P-8)	
[36]	[35]	Tension Lever Assembly	T	DM1,DM15		
[37]	[36]	T Lever Holder	T	DM15	*(L-12)	
[38]	[34]	Reel (TU)(D2)	T	DM1,DM15		
[39]	[38]	M Gear	T	DM1,DM15		
[40]	[36]	Reel (SP)(D2)	T	DM1,DM15		
[41]	[32],[36]	Moving Guide S Preparation	T	DM1,DM16		
[42]	[33]	Moving Guide T Preparation	T	DM1,DM16		
[43]	[19]	TG Post Assembly	T	DM1,DM16	*(L-13)	
[44]	[28]	Rack Assembly	R	DM17		(+)Refer to Alignment Sec.Pg.2-4-9
[45]	[44]	F Door Opener	R	DM17		
[46]	[46]	Cleaner Assembly	T	DM1,DM6		
[47]	[46]	CL Post	T	DM6	*(L-14)	
↓ (1)	↓ (2)	↓ (3)	↓ (4)	↓ (5)	↓ (6)	↓ (7)

(1): Follow steps in sequence. When reassembling, follow the steps in reverse order.

These numbers are also used as identification (location) No. of parts in the figures.

(2): Indicates the part to start disassembling with in order to disassemble the part in column (1).

(3): Name of the part

(4): Location of the part: T=Top B=Bottom R=Right L=Left

(5): Figure Number

(6): Identification of parts to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.

P=Spring, W=Washer, C=Cut Washer, S=Screw, *=Unhook, Unlock, Release, Unplug, or Desolder

e.g., 2(L-2) = two Locking Tabs (L-2).

(7): Adjustment Information for Installation

(+):Refer to Deck Exploded Views for lubrication.

Top View

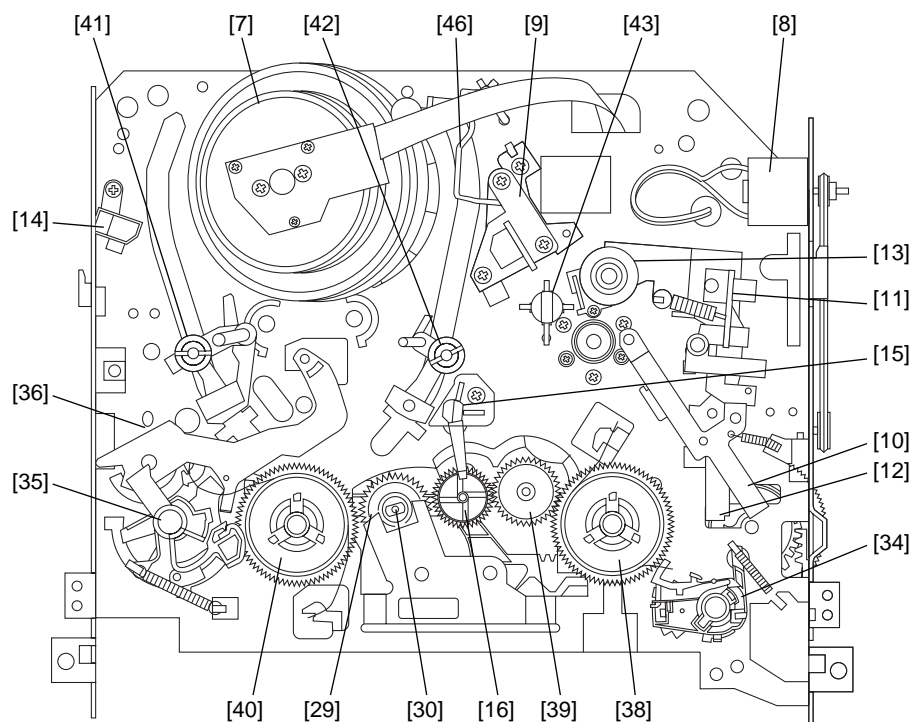


Fig. DM1

Bottom View

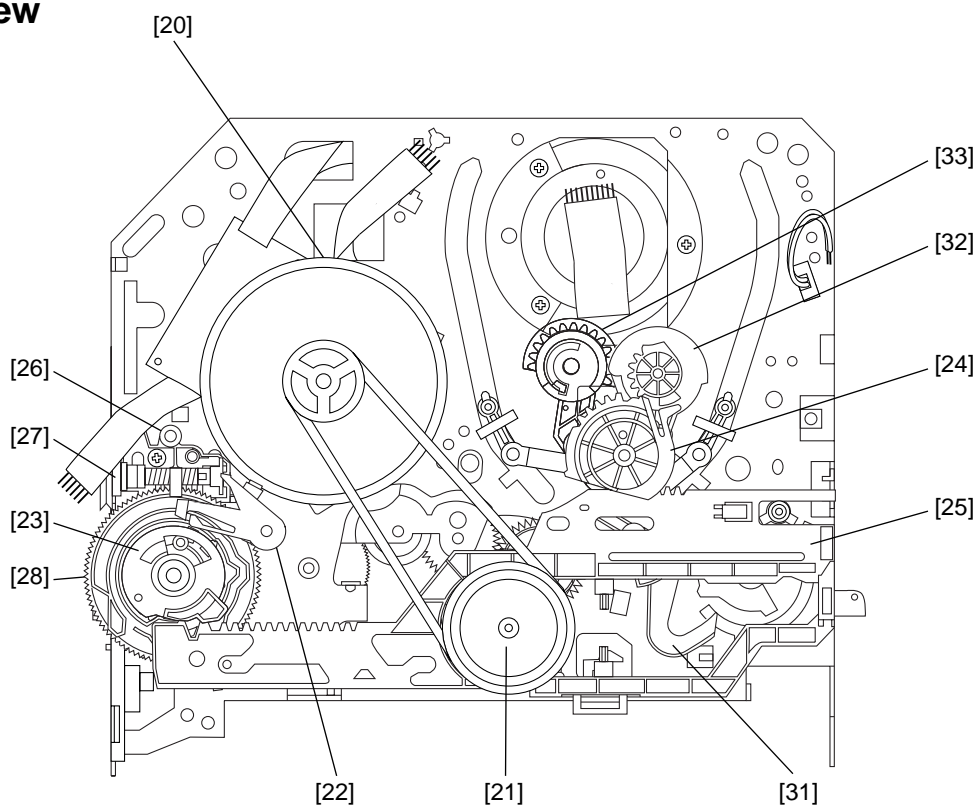
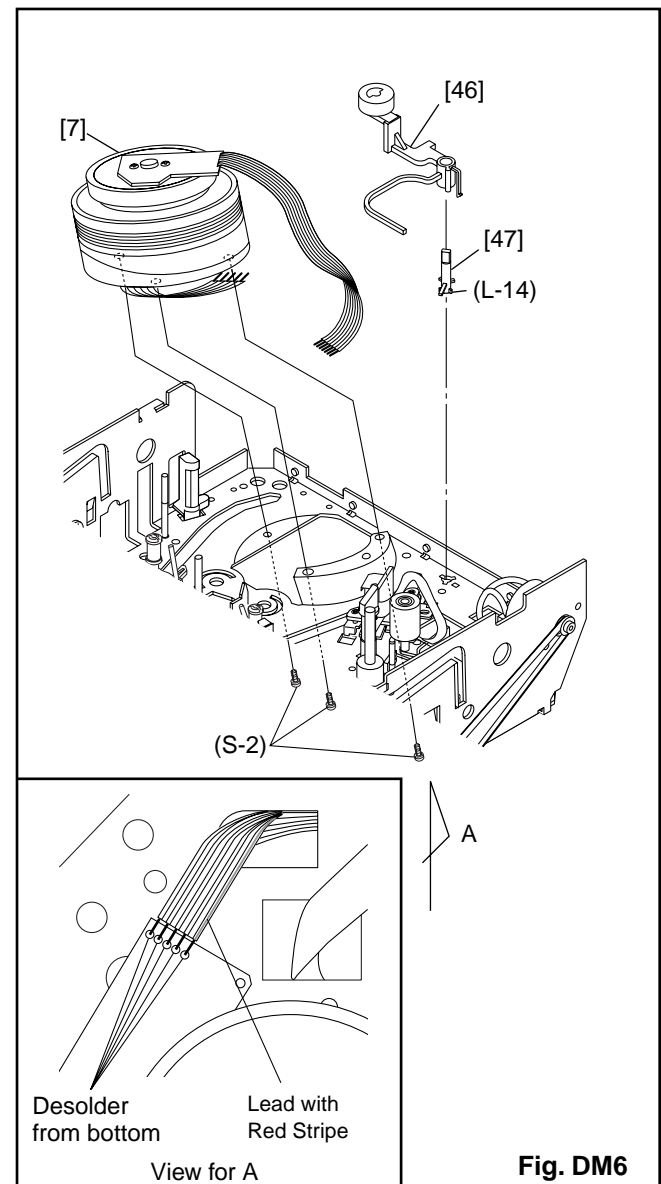
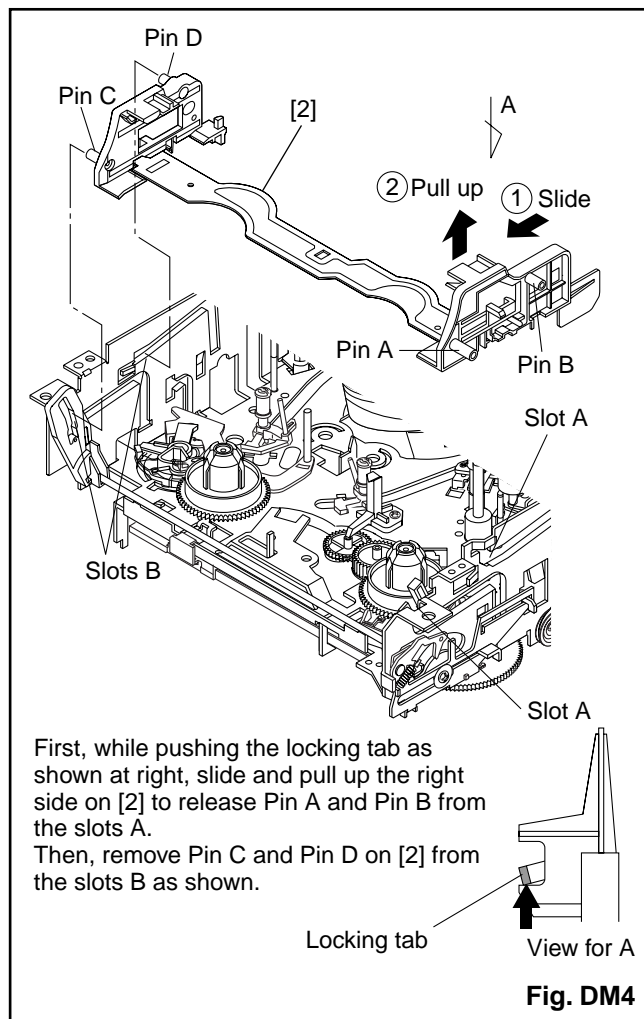
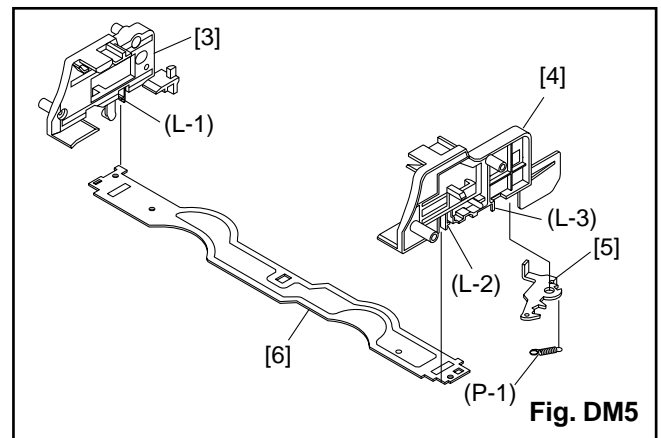
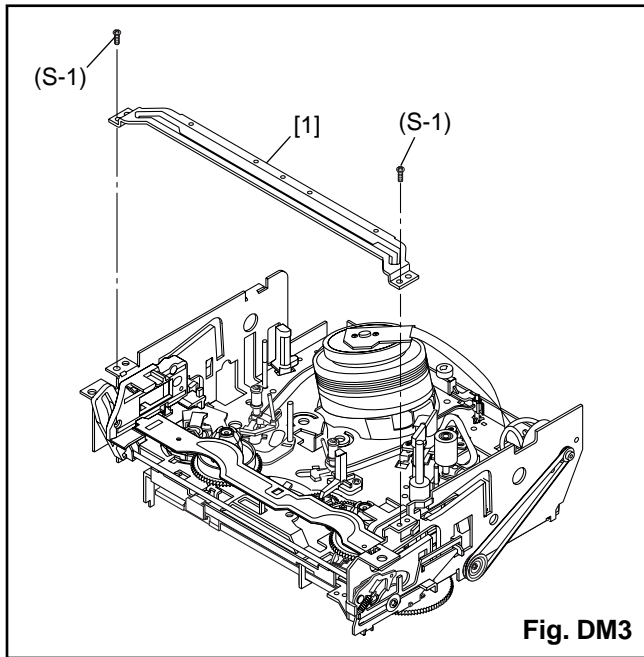
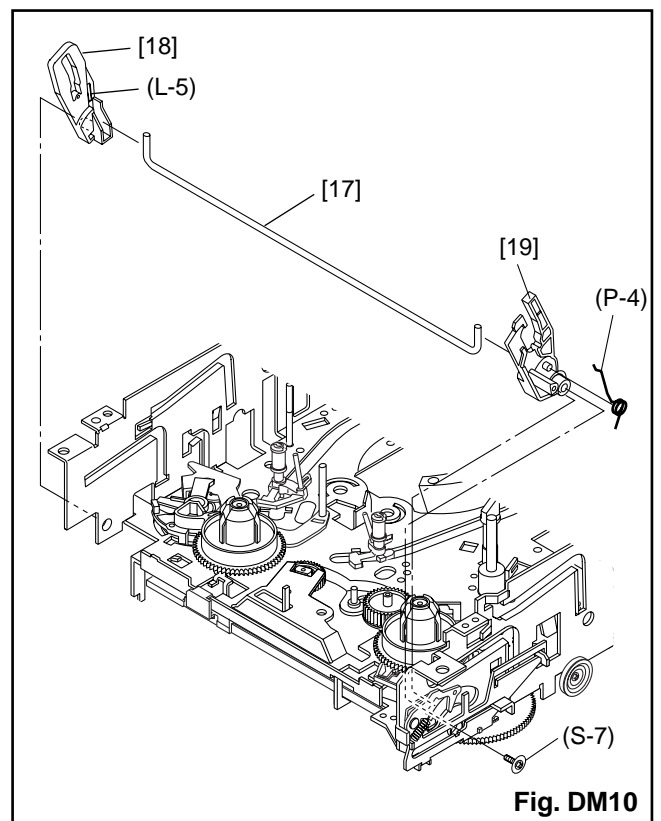
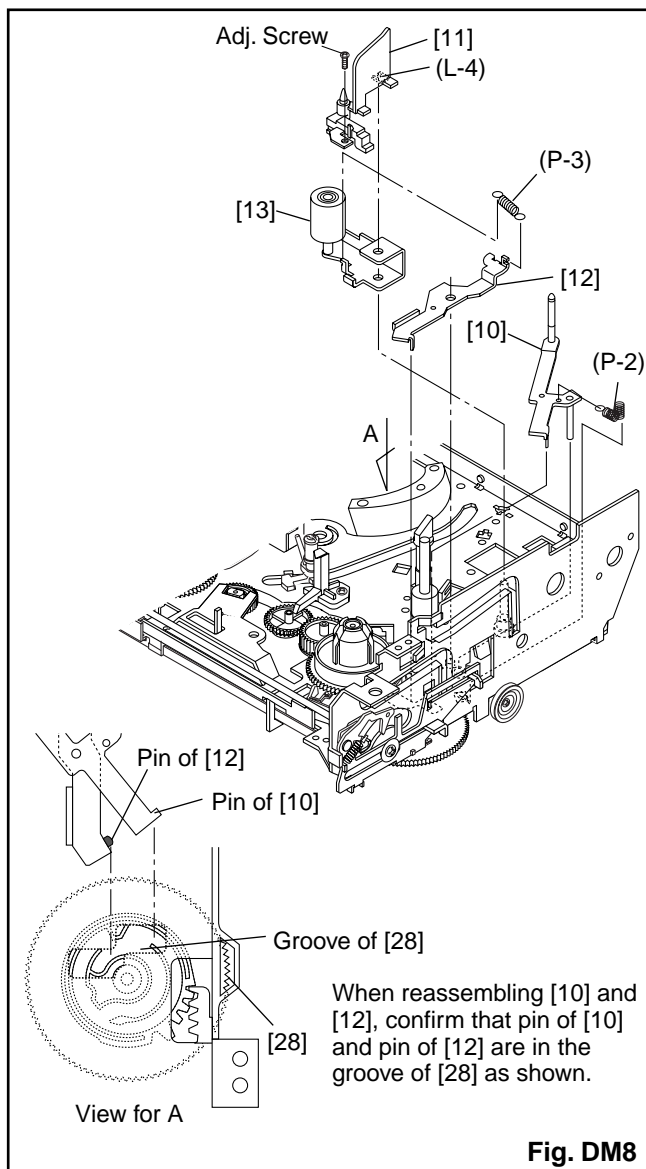
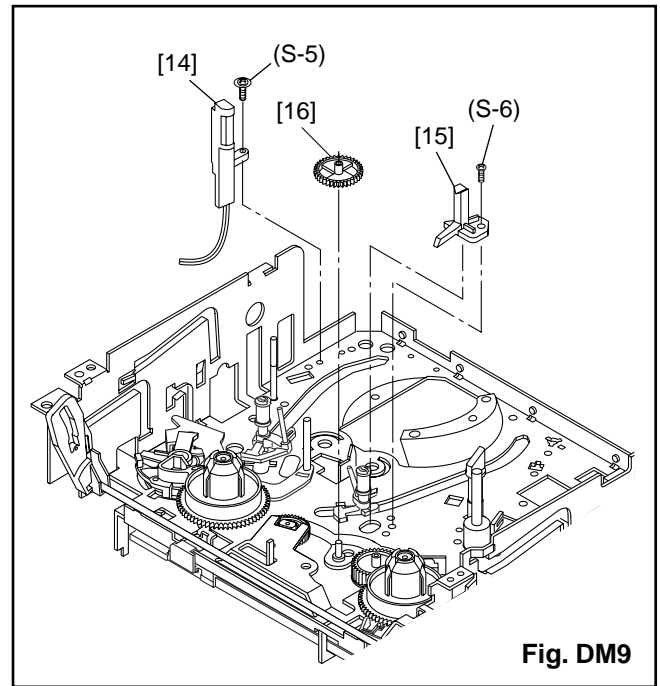
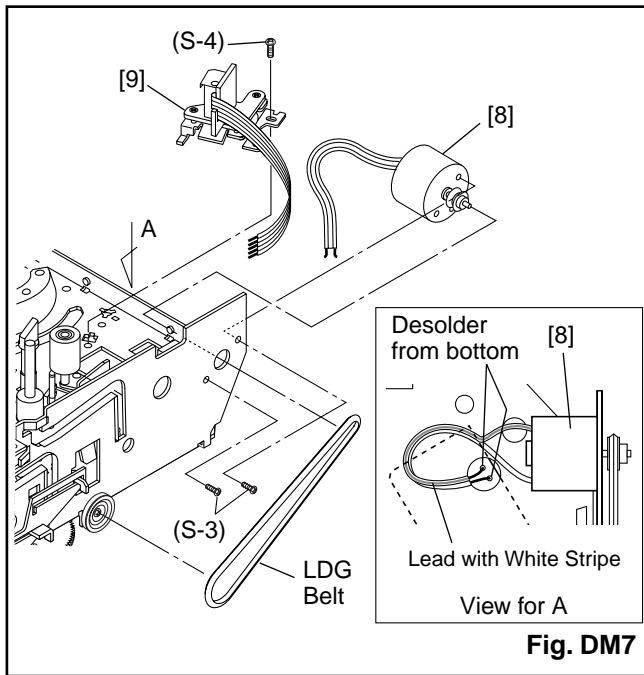
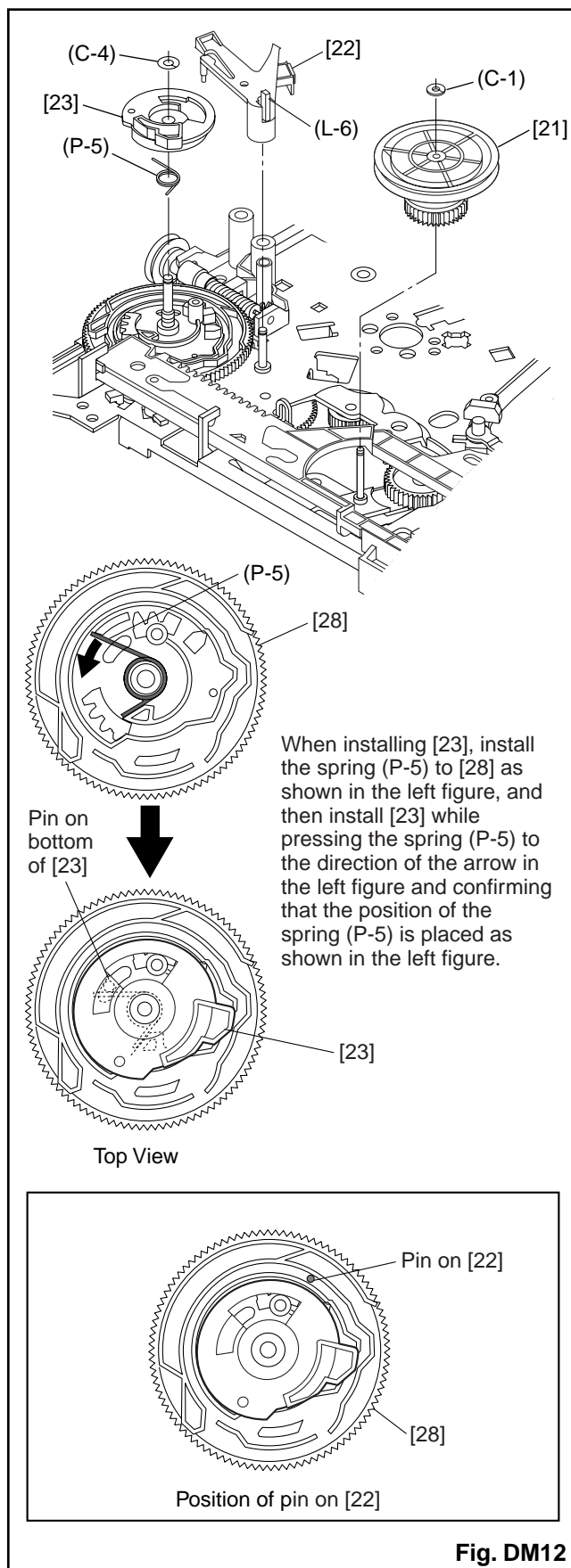
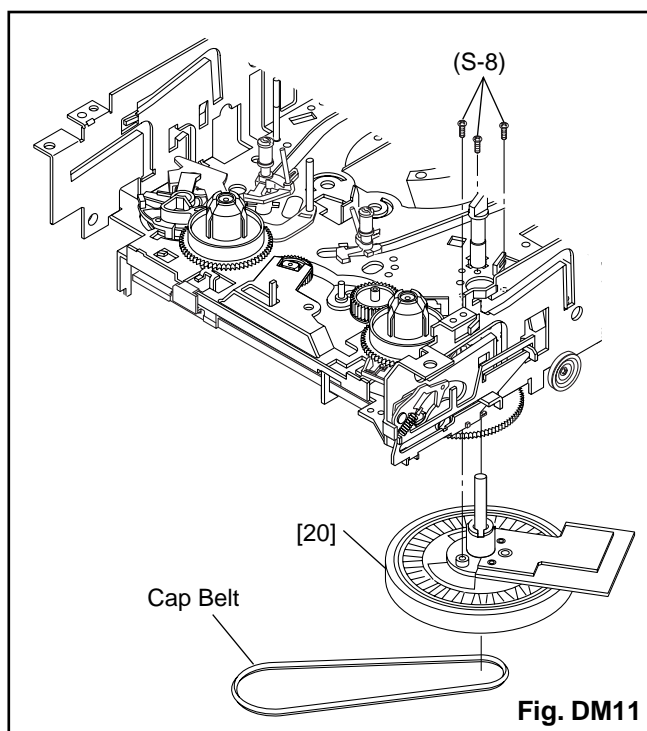


Fig. DM2







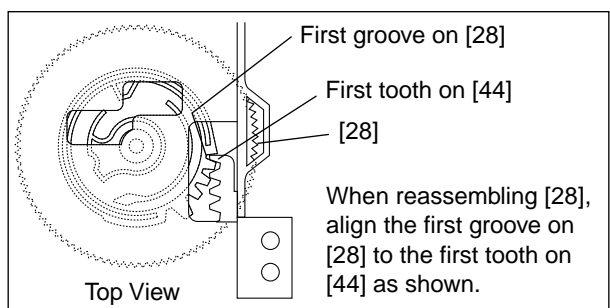
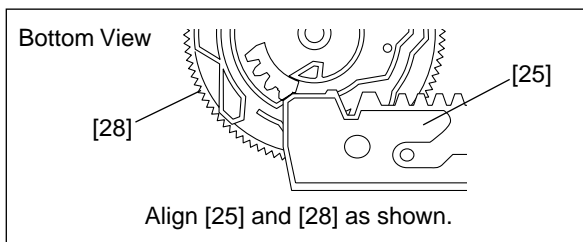
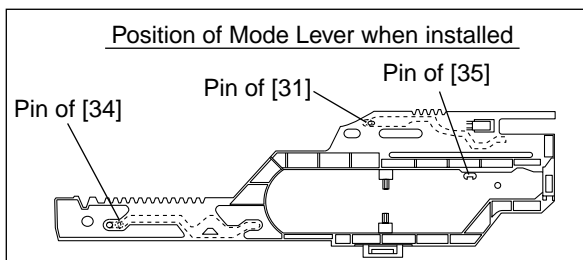
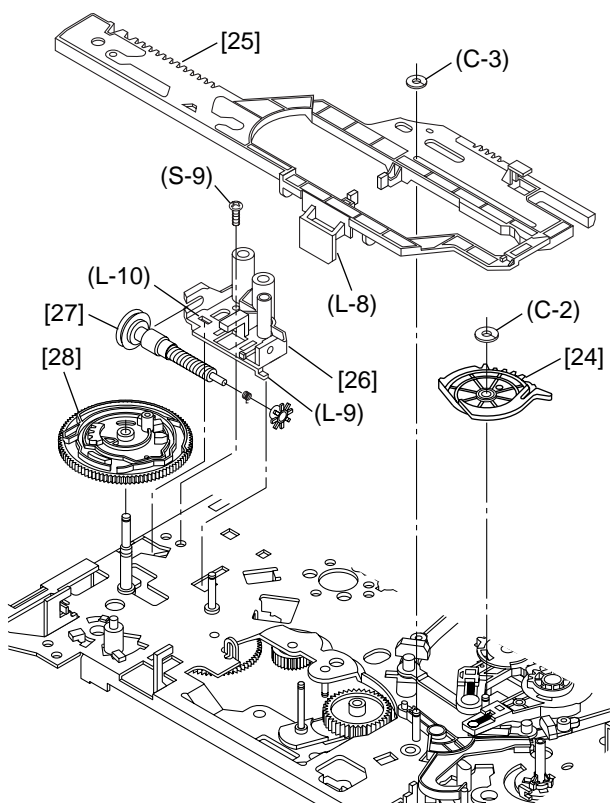


Fig. DM13

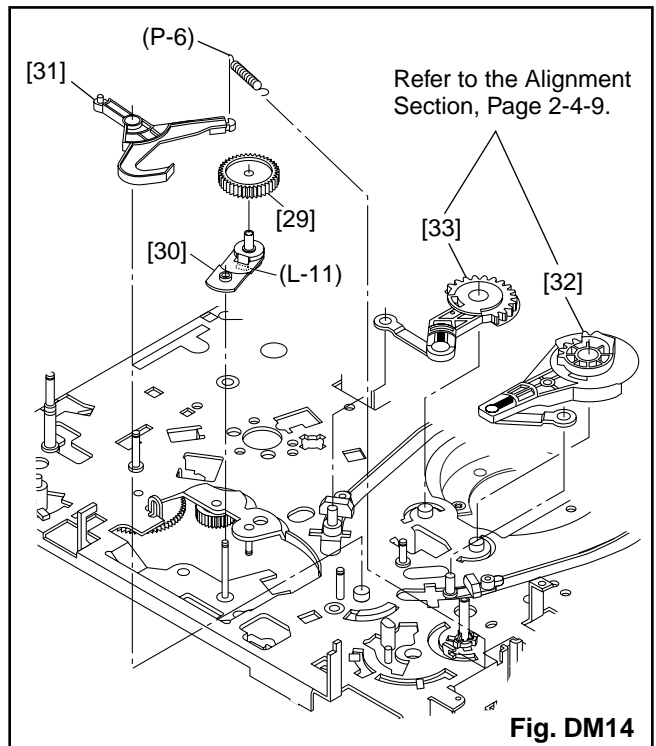


Fig. DM14

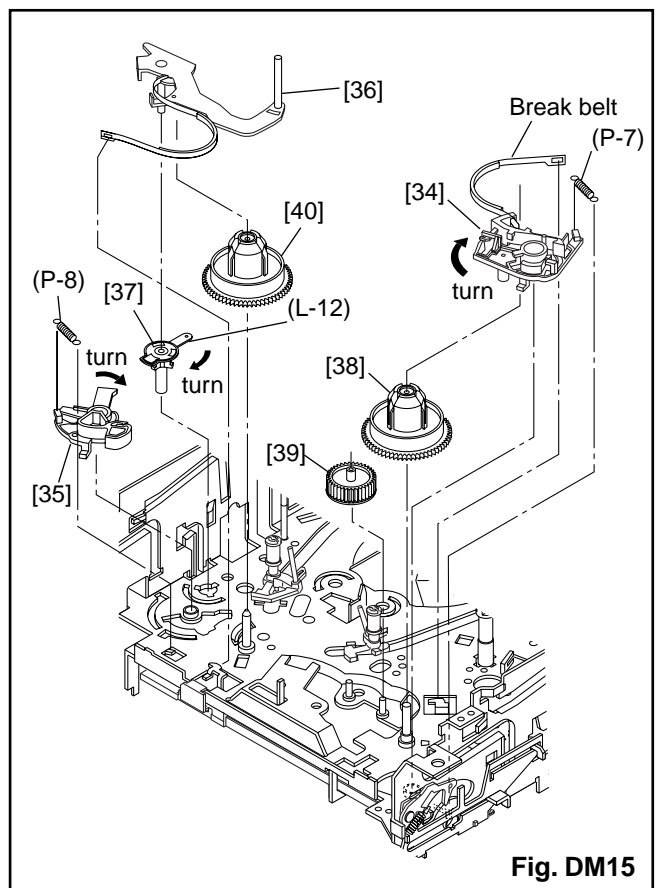
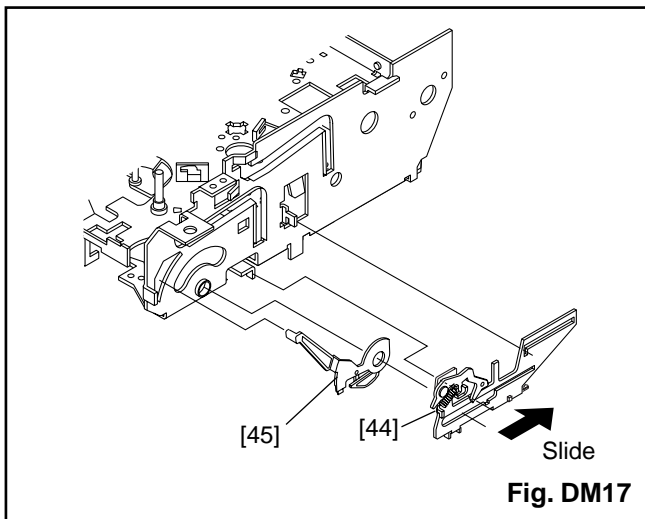
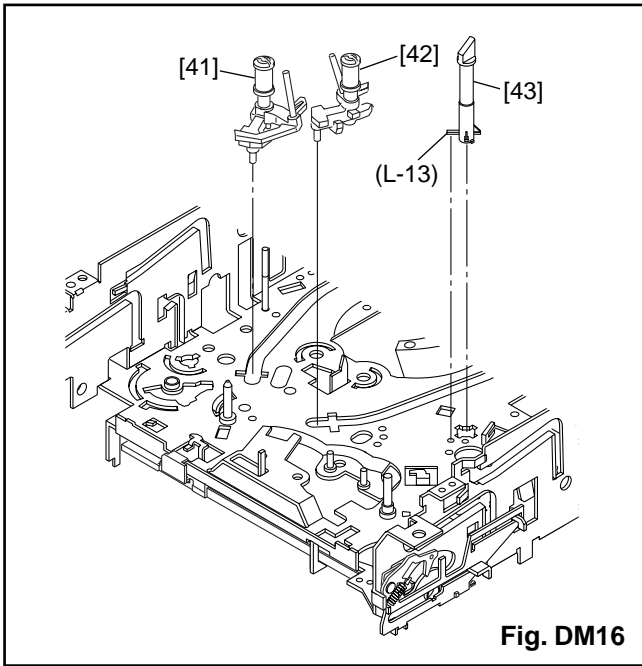


Fig. DM15



ALIGNMENT PROCEDURES OF MECHANISM

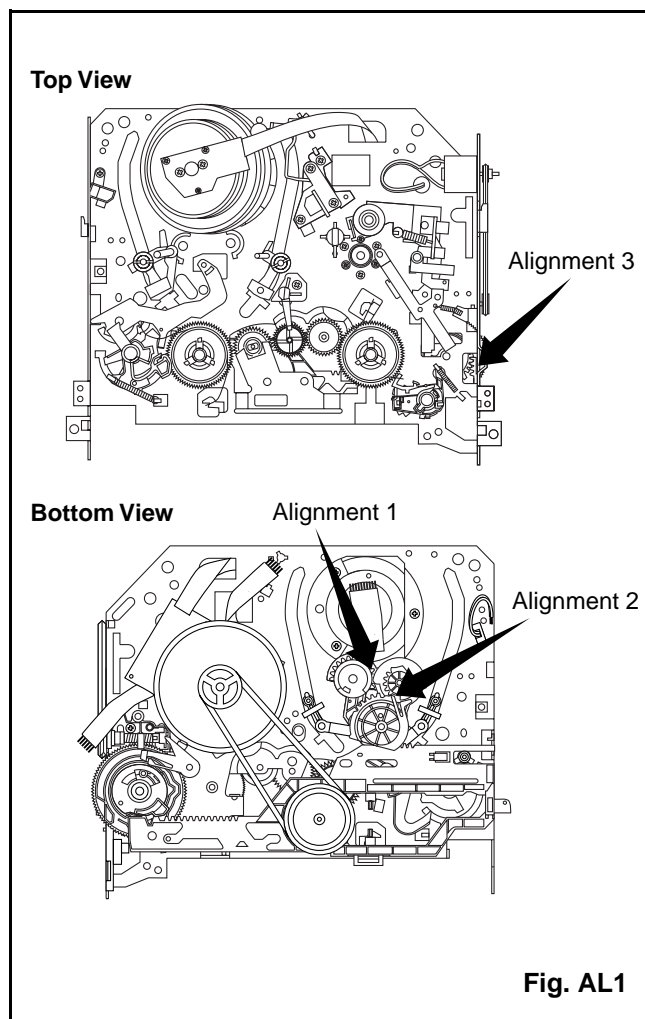
The following procedures describe how to align the individual gears and levers that make up the tape loading/unloading mechanism. Since information about the state of the mechanism is provided to the System Control Circuit only through the Mode Switch, it is essential that the correct relationship between individual gears and levers be maintained.

All alignments are to be performed with the mechanism in Eject mode, in the sequence given. Each procedure assumes that all previous procedures have been completed.

IMPORTANT:

If any one of these alignments is not performed properly, even if off by only one tooth, the unit will unload or stop and it may result in damage to the mechanical or electrical parts.

Alignment points in Eject Position



Alignment 1

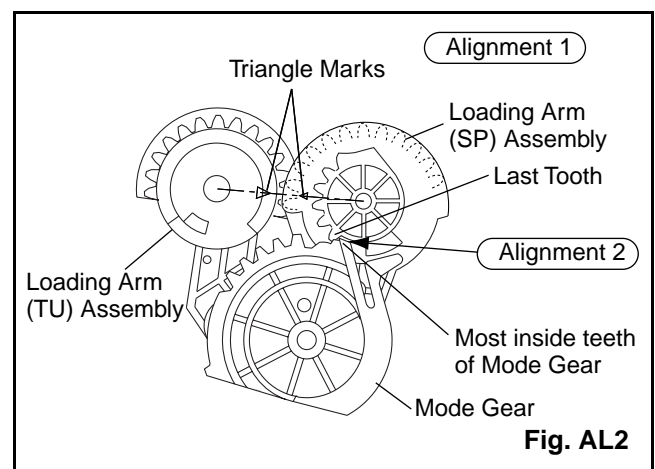
Loading Arm (SP) and (TU) Assembly

Install Loading Arm (SP) and (TU) Assembly so that their triangle marks point to each other as shown in Fig. AL2.

Alignment 2

Mode Gear

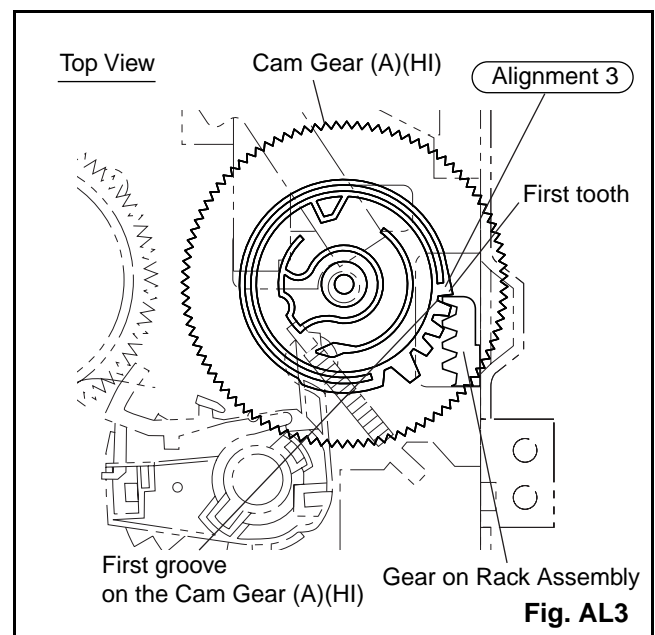
Keeping the two triangles pointing at each other, install the Loading Arm (TU) Assembly so that the last tooth of the gear meets the most inside teeth of the Mode Gear. See Fig. AL2.



Alignment 3

Cam Gear (A), Rack Assembly

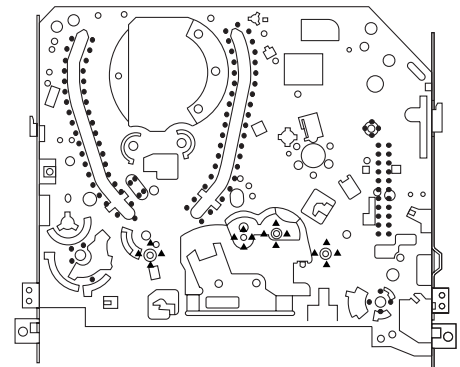
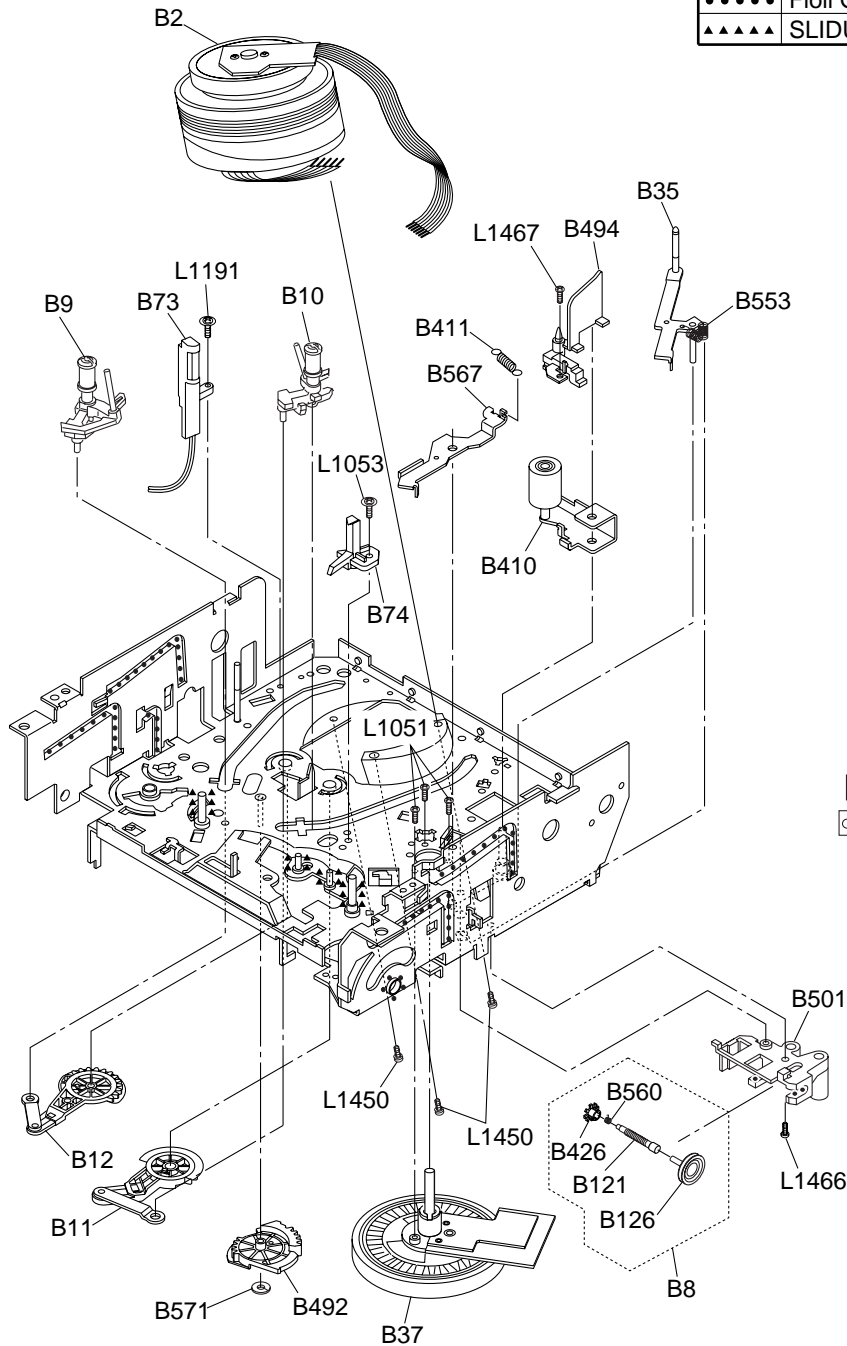
Install the Rack Assembly so that the first tooth on the gear of the Rack Assembly meets the first groove on the Cam Gear (A) as shown in Fig. AL3.



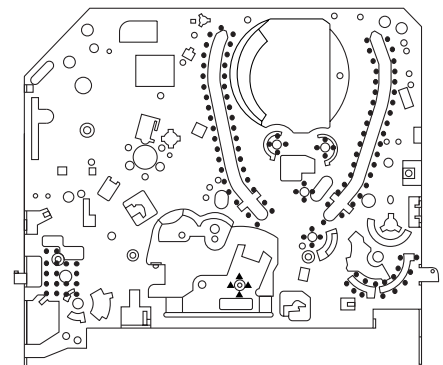
DECK EXPLODED VIEWS

Deck Mechanism View 1

Mark	Description
•••••	Floil G-684G or Multemp MH-D (Blue grease)
▲▲▲▲▲	SLIDUS OIL #150



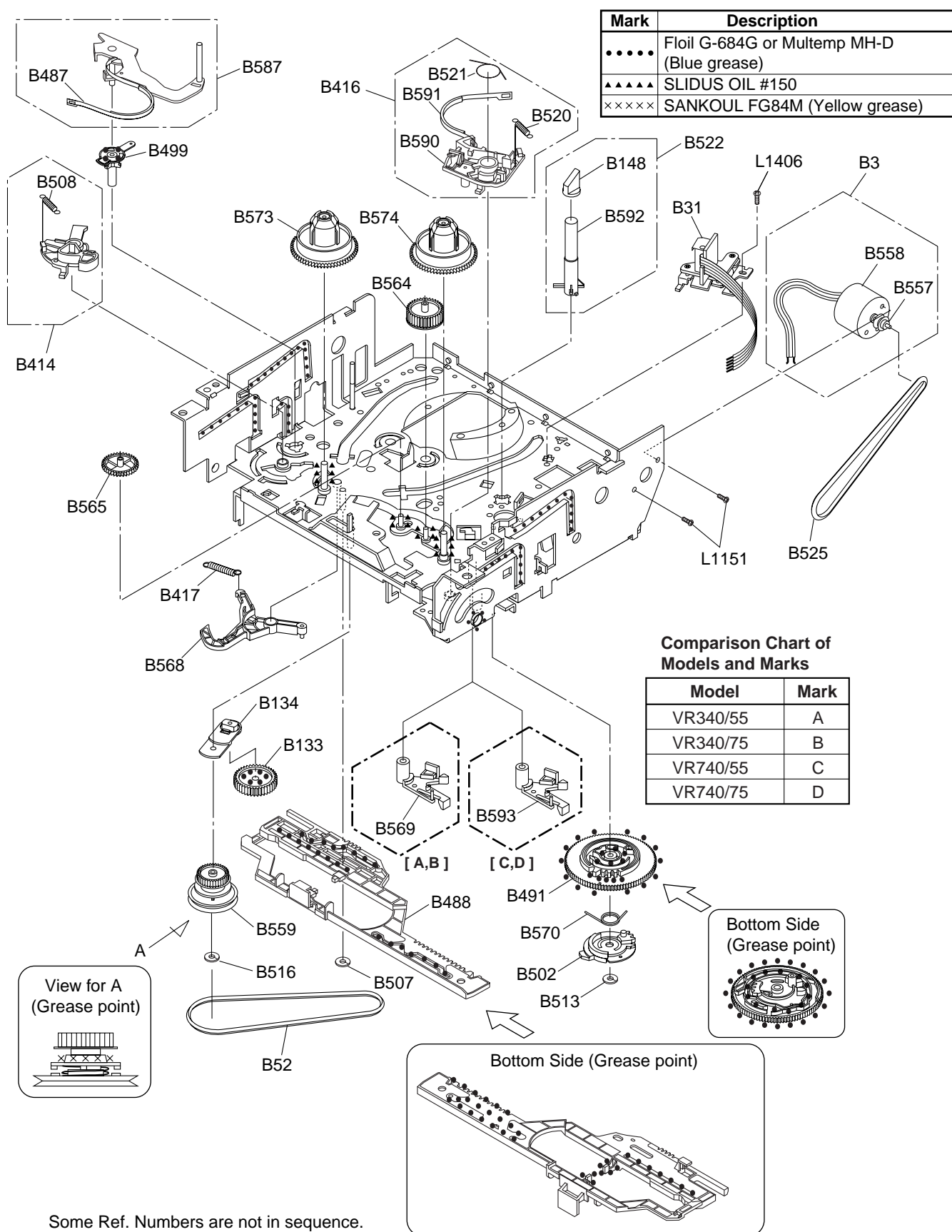
Chassis Assembly
Top View (Lubricating Point)



Chassis Assembly
Bottom View (Lubricating Point)

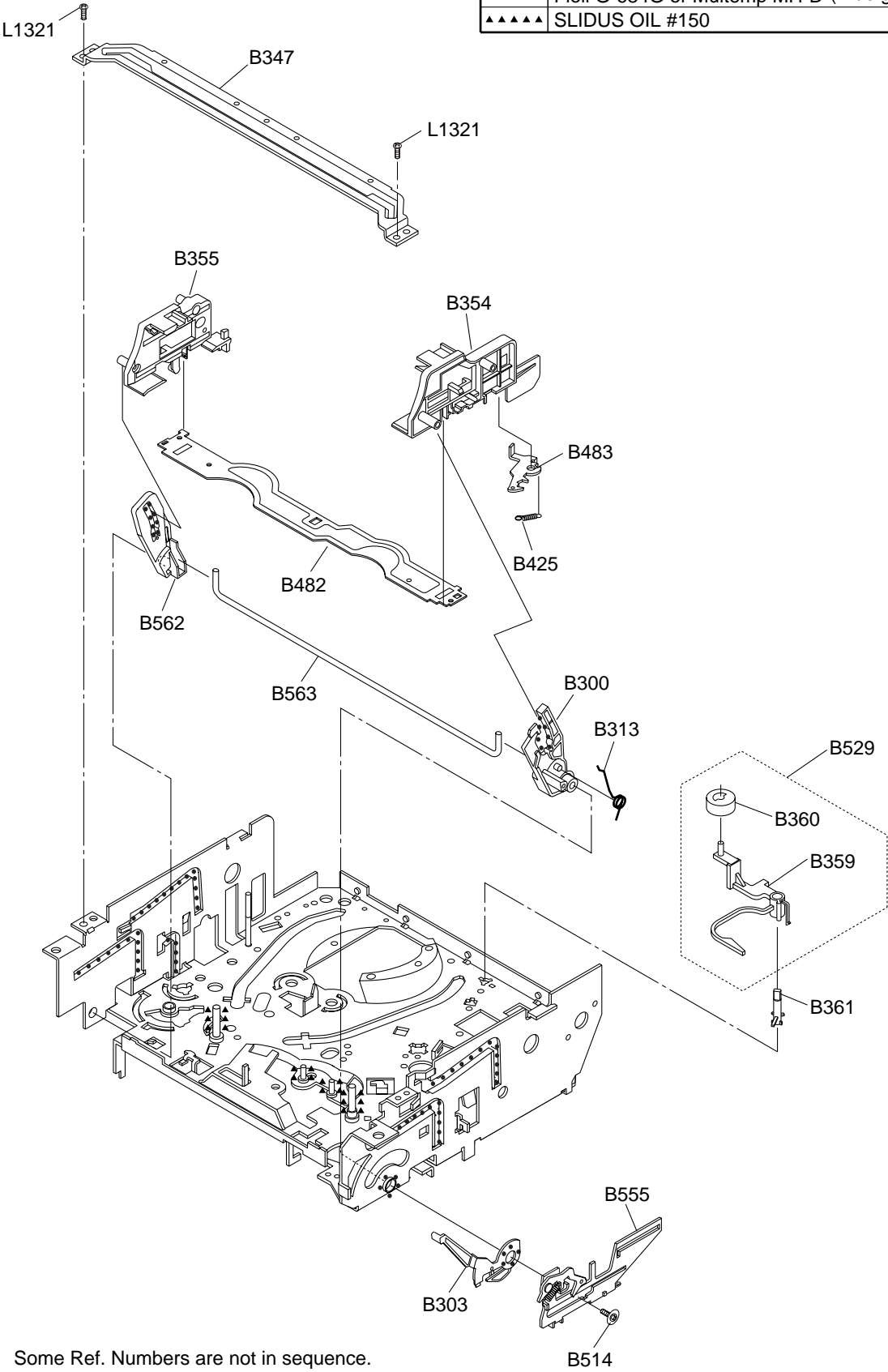
Some Ref. Numbers are not in sequence.

Deck Mechanism View 2



Deck Mechanism View 3

Mark	Description
.....	Floil G-684G or Multemp MH-D (Blue grease)
▲▲▲▲	SLIDUS OIL #150



Some Ref. Numbers are not in sequence.

DECK PARTS LIST				VR140/02	VR140/07	VR840/39	VR840/58
Pos.	▲	12 NC	Description				
B2		9965 000 17189	CYLINDER ASSEMBLY MK12 PAL 2HD 2SP	1	1		
B2		9965 000 16630	CYLINDER ASSEMBLY MK12 PAL 4HD HIFI			1	1
B3		9965 000 17190	LOADING MOTOR ASSEMBLY MK12	1	1	1	1
B8		9965 000 17191	PULLEY ASSEMBLY MK12	1	1	1	1
B9		9965 000 16632	MOVING GUIDE S PREPARATION MK12	1	1	1	1
B10		9965 000 16633	MOVING GUIDE T PREPARATION MK12	1	1	1	1
B11		9965 000 16634	LOADING ARM(TU) ASSEMBLY MK12	1	1	1	1
B12		9965 000 16635	LOADING ARM(SP) ASSEMBLY MK12	1	1	1	1
B31		9965 000 16636	AC HEAD ASSEMBLY MK12	1	1	1	1
B35		9965 000 16637	TAPE GUIDE ARM ASSEMBLY MK12	1	1	1	1
B37		9965 000 17192	CAPSTAN MOTOR 288/VCCM012	1	1	1	1
B52		9965 000 08593	CAP BELT MK10	1	1	1	1
B73		9965 000 12210	FE HEAD ASSEMBLY MK11	1	1	1	1
B74		9965 000 08555	PRISM MK10	1	1	1	1
B121		9965 000 16640	WORM MK12	1	1	1	1
B126		9965 000 16641	PULLEY MK12	1	1	1	1
B133		9965 000 17193	IDLER GEAR MK12	1	1	1	1
B134		9965 000 17194	IDLER ARM MK12	1	1	1	1
B148		9965 000 12368	TG CAP MK11	1	1	1	1
B300		9965 000 16643	C DRIVE LEVER(TU) MK12	1	1	1	1
B303		9965 000 16644	F DOOR OPENER MK12	1	1	1	1
B313		9965 000 16645	C DRIVE SPRING MK12	1	1	1	1
B347		9965 000 08445	GUIDE HOLDER A MK10	1	1	1	1
B354		9965 000 16646	SLIDER(TU) MK12	1	1	1	1
B355		9965 000 16647	SLIDER(SP) MK12	1	1	1	1
B359		9965 000 08449	CLEANER LEVER MK10	1	1	1	1
B360		9965 000 06561	CLEANER ROLLER MK9	1	1	1	1
B361		9965 000 08450	CL POST MK10	1	1	1	1
B410		9965 000 16648	PINCH ARM(A) ASSEMBLY(4) MK12	1	1	1	1
B411		9965 000 16649	PINCH SPRING MK12	1	1	1	1
B414		9965 000 17195	M BRAKE(SP) ASSEMBLY MK12	1	1	1	1
B416		9965 000 17196	M BRAKE(TU) ASSEMBLY MK12	1	1	1	1
B417		9965 000 17197	TENSION SPG(3002654) MK12	1	1	1	1
B425		9965 000 08457	LOCK LEVER SPRING MK10	1	1	1	1
B426		9965 000 08458	KICK PULLEY MK10	1	1	1	1
B482		9965 000 16653	CASSETTE PLATE MK12	1	1	1	1
B483		9965 000 16654	LOCK LEVER MK12	1	1	1	1
B487		9965 000 16655	BAND BRAKE(SP) MK12	1	1	1	1
B488		9965 000 17198	MODE LEVER MK12	1	1	1	1
B491		9965 000 17199	CAM GEAR(A) MK12	1	1	1	1
B492		9965 000 16658	MODE GEAR MK12	1	1	1	1
B494		9965 000 16659	C DOOR OPENER MK12	1	1	1	1
B499		9965 000 16660	T LEVER HOLDER MK12	1	1	1	1
B501		9965 000 16661	WORM HOLDER MK12	1	1	1	1
B502		9965 000 17200	CAM GEAR(B) MK12	1	1	1	1
B507		9965 000 05342	REEL WASHER MK9 5*2.1*0.5	1	1	1	1
B508		9965 000 08470	S BRAKE SPRING MK10	1	1	1	1
B513		9965 000 17201	CAM WASHER MK12	1	1	1	1
B514		9965 000 08641	SCREW RACK MK10	1	1	1	1
B516		9965 000 05342	REEL WASHER MK9 5*2.1*0.5	1	1	1	1
B520		9965 000 17202	TU BRAKE SPRING MK12	1	1	1	1
B521		9965 000 16662	REV BRAKE SPRING MK12	1	1	1	1
B522		9965 000 12373	TG POST ASSEMBLY MK11	1	1	1	1
B525		9965 000 12230	LDG BELT MK11	1	1	1	1
B529		9965 000 08504	CLEANER ASSEMBLY MK10	1	1	1	1
B553		9965 000 12233	REV SPRING MK11	1	1	1	1
B555		9965 000 16663	RACK ASSEMBLY MK12	1	1	1	1
B557		9965 000 08519	MOTOR PULLEY U5	1	1	1	1
B558		9965 000 17203	LOADING MOTOR M31E-1 R14 7352	1	1	1	1
B559		9965 000 17204	CLUTCH ASSEMBLY MK12	1	1	1	1

DECK PARTS LIST				VR140/02	VR140/07	VR840/39	VR840/58
Pos.	▲	12 NC	Description				
B560		9965 000 08522	KICK SPRING MK10	1	1	1	1
B562		9965 000 16665	C DRIVE LEVER(SP) MK12	1	1	1	1
B563		9965 000 16666	SLIDER SHAFT MK12	1	1	1	1
B564		9965 000 17205	M GEAR MK12	1	1	1	1
B565		9965 000 17206	SENSOR GEAR MK12	1	1	1	1
B567		9965 000 16669	PINCH ARM(B) MK12	1	1	1	1
B568		9965 000 16670	BT ARM MK12	1	1	1	1
B569		9965 000 17207	CAM HOLDER(F) MK12	1	1		
B570		9965 000 12240	CAM RACK SPRING(HI) MK11	1	1	1	1
B571		4822 532 13159	P.S.W CUT 1.6X4.0X0.5T	1	1	1	1
B573		9965 000 17208	REEL(SP)(D2) MK12	1	1	1	1
B574		9965 000 17209	REEL(TU)(D2) MK12	1	1	1	1
B587		9965 000 16674	TENSION LEVER ASSEMBLY MK12	1	1	1	1
B590		9965 000 16677	BRAKE ARM(TU) MK12	1	1	1	1
B591		9965 000 17210	BAND BRAKE(TU) MK12	1	1	1	1
B592		9965 000 17211	TG POST MK11	1	1	1	1
B593		9965 000 17332	CAM HOLDER(F) ASSEMBLY MK12			1	1
L1051		9965 000 05359	SCREW, B-TIGHT M2.6X6 PAN HEAD+	1	1	1	1
L1053		9965 000 05375	SCREW, S-TIGHT M2.6X8 WASHER HEAD+	1	1	1	1
L1151		9965 000 08642	SCREW, SEMS M2.6X4 PAN HEAD+	1	1	1	1
L1191		9965 000 05375	SCREW, S-TIGHT M2.6X8 WASHER HEAD+	1	1	1	1
L1321		4822 502 14009	SCREW, S-TIGHT M3X6 BIND HEAD+	1	1	1	1
L1406		9965 000 08643	AC HEAD SCREW MK9	1	1	1	1
L1450		4822 502 14671	SCREW, SEMS M2.6X5 PAN HEAD+	1	1	1	1
L1466		9965 000 05364	SCREW, S-TIGHT M2.6X6 BIND HEAD+	1	1	1	1
L1467		9965 000 12251	SCREW, S-TIGHT M2.6X5 WASHER HEAD+	1	1	1	1